REPORT RESUMES

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LINGUISTICS AND THE CLASSROOM TEACHER, SOME IMPLICATIONS FOR INSTRUCTION IN THE MOTHER TONGUE.

BY- SHANE, HAROLD G.

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IT IS THE AUTHOR'S PURPOSE IN THIS BOOKLET TO HELP TEACHERS AND CURRICULUM SPECIALISTS UNDERSTAND WHY LINGUISTICS IS SO IMPORTANT AND TO UNDERSTAND ITS APPLICATIONS IN THE CLASSROOM. THE READER IS ALSO INTRODUCED TO THE HISTORY, TECHNICAL VOCABULARY, AND PRESENT STATUS OF RESEARCH AND THEORY IN LINGUISTICS AND ENCOURAGED TO CONTINUE SELF-STUDY IN THIS FIELD. THE AUTHOR FIRST OUTLINES THE SCOPE OF LINGUISTICS, DEFINES SOME OF THE MOST IMPORTANT TERMS USED BY LINGUISTS, AND REVIEWS THE HISTORY OF LINGUISTICS AS A FIELD OF STUDY. IN A CHAPTER ON "LINGUISTICS AND CLASSROOM PRACTICES" HE DISCUSSES THE IMPORTANCE OF LINGUISTICS IN READING INSTRUCTION, LITERATURE, SPELLING, COMPOSITION AND HANDWRITING, AND GRAMMAR AND USAGE. ANOTHER CHAPTER REVIEWS LINGUISTIC RESEARCH CONCERNED WITH THESE TOPICS AND REFERS THE READER TO SPECIFIC PUBLICATIONS FOR FURTHER INFORMATION. A SHORT FINAL CHAPTER INCLUDES CONJECTURES ABOUT FUTURE TRENDS IN ENGLISH LANGUAGE ARTS INSTRUCTION IN THE 1970'S. APPENDED IS A BIBLIOGRAPHY OF 329 SELECTED BOOKS, PERIODICAL ARTICLES, RESEARCH REPORTS, AND OTHER MATERIALS OF INTEREST TO THE CLASSROOM TEACHER. THIS PUBLICATION MAY BE OBTAINED FOR $2.75 FROM THE ASSOCIATION FOR SUPERVISION AND CURRICULUM DEVELOPMENT, NEA, 1201 SIXTEENTH STREET, N.W., WASHINGTON, D.C. 20036. (JD)

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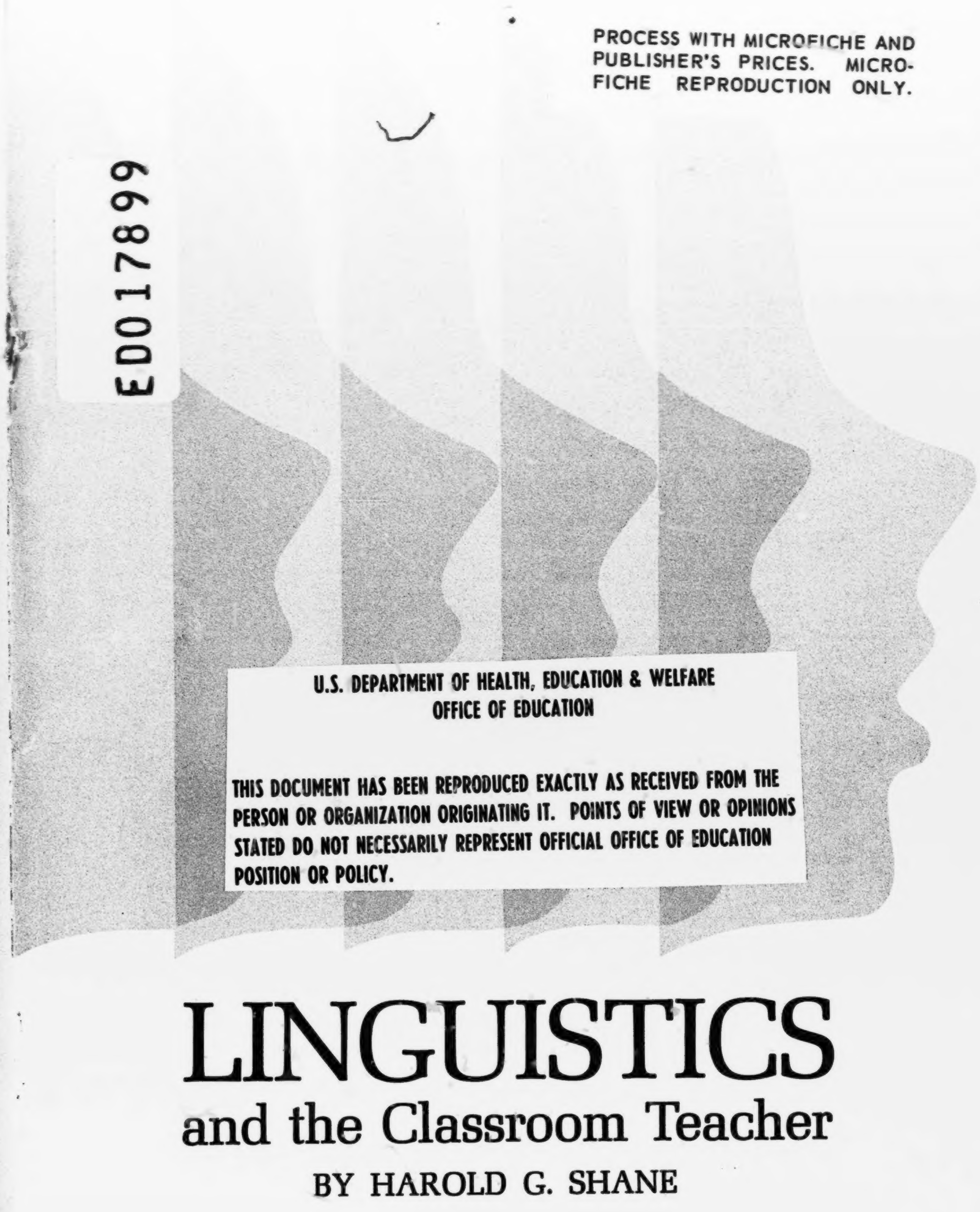

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LINGUISTICS
and the Classroom Teacher

BY HAROLD G. SHANE

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LINGUISTICS
and the Classroom Teacher

Some Implications for
Instruction in the Mother Tongue

HAROLD G. SHANE

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Foreword

IF THE reader is confused about the field of linguistics and its implications for the classroom, it is apparent that many educators keep him company, and it is even more apparent that he has not yet read this fine monograph. The breadth of areas within this scholarly discipline and the fact that linguists often write in a highly technical vocabulary have made it difficult for educators to keep abreast of recent rapid developments in linguistics.

Only a true scholar can reduce complicated ideas to simple terms, and it requires a touch of genius to do this and not bridge the truth. Dr. Harold G. Shane, University Professor of Education at Indiana University, has devoted the kind of study, research, and ability to *Linguistics and the Classroom Teacher* to make this possible.

Linguistics has now become a vigorous catalyst stimulating current developments in the curriculum. ASCD is pleased to bring you this timely monograph dealing with the nature, implications and applications of linguistics in the teaching of English.

May 1967

J. HARLAN SHORES
President, 1967-68
Association for Supervision
and Curriculum Development

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Various graduate assistants at Indiana University contributed to the inevitable, laborious research tasks and reviews reflected in the text of this booklet. The following persons gave especially extensive service: C. Keith Martin and Howard Hayward. Finally, a warm word of gratitude is due Anwar Dil, a graduate student in linguistics at Indiana University and on leave from his post of Language Specialist, Extension Center, Government of West Pakistan, on deputation with the University of the Punjab, Lahore.

For the final editing and production effort that went into the monograph, recognition and admiration are due Robert R. Leeper, Associate Secretary and Editor, ASCD Publications, and his assistants: Marcia Abercrombie, Ruth P. Ely, Sharon Landau and Mary Ann Lurch.

March 1967
Bloomington, Indiana

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Chapter I

The Quiet English Reformation

BY THE mid-1950's everyone seemed aware of the "new mathematics" and "new science" programs. Except for a few specialists in English education, however, most teachers were almost unaware of new and important developments in the teaching of the English language arts. They had not realized that a quiet reformation had begun around 1950—one that would encompass basic curriculum change by the mid-1960's and affect the ways in which English would be taught.

To a considerable extent, the "reform" movement which reshaped the mathematics and science curricula came from professors in the academic disciplines. Beginning in the 1950's, they directly participated in the launching of instructional changes. A résumé of these innovations and changes is given in Goodlad's *The Changing School Curriculum* (109).[1]

Much of the impetus for change in English instruction has come from the work of the people in the field of linguistics.[2] Especially since the 1960's, their ideas and recommendations have been heeded with an attention almost bordering on awe. In fact, the very word, *linguistics,* has acquired a magical quality. It seems to be accepted as a touchstone that holds the promise of transmuting outmoded English teaching methods into golden new ones.

As the chairman of a high school English department put it:

> . . . throw the word [linguistics] into any conversation of English teachers and there follows a few moments of embarrassed silence . . . then a free-for-all of bludgeoning ignorance. No one knows what anyone else is talking about, but each has his say (255:758).

Understanding linguistics and the role it can play in improving instruction in the mother tongue is important. Without this understanding, the magic of linguistics may get out of hand and, like the brooms put to work by the sorcerer's apprentice, lead to ludicrous catastrophe.

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[1] All references in parentheses are coded to correspond to the books and articles cited in the master bibliography which begins on page 85.

[2] It should also be noted that the National Council of Teachers of English long has recognized and emphasized the importance of linguistics in English instruction and urged the adoption of improved classroom practices derived from linguistics.

The purpose of this booklet. Despite widespread discussion, there is considerable confusion regarding the nature of linguistics and its implications for the classroom. This is understandable for there are some serious problems associated with the study of linguistics. *First,* it is a broad-ranging discipline in which the mastery of a single specialty or aspect may take years. *Second,* it also has a highly technical vocabulary—one that confuses an uninitiated person trying to acquire information on his own. *Third,* linguists do not always express themselves in a fashion that is intelligible to people who have little or no special preparation in this particular field.

Recognizing the importance of the linguists' contribution to our understanding of English, the Association for Supervision and Curriculum Development commissioned this booklet, *Linguistics and the Classroom Teacher,* to help teachers and curriculum specialists understand why linguistics is important and to understand its applications in the classroom. It is also intended to help the reader acquire a modest foundation with respect to the history, technical vocabulary, and the present status of research and theory in linguistics so that further self-study is facilitated and encouraged.

A good starting point seems to be the discussion of the meaning of the term, *linguistics.*[3]

What Do We Mean, Linguistics?

Some definitions. The man-in-the-street probably thinks that a linguist is someone who speaks several languages. Such a person generally has not given any thought to the meaning of a word like *linguistics.*

Many teachers, on the other hand, have thought about the term, *linguistics.* They may define it as ". . . the scientific study of language" (214:32). Or they may give a more elaborate definition ". . . the study of human speech including the nature, structure, and modification of language" (318:495).

Both of these definitions help to give us a concept of the linguist. By extrapolating the definition, he may be identified as a person who builds his career around the scholarly study of human language. Usually, he concentrates on one or two of the specialties into which the scientific study of language divides itself. He may or may not speak several languages.

---

[3] One says linguistics "is" rather than "are" since it is a plural noun construed as singular.

But what is linguistics? Definitions help, but definitions, alone, of course, do not explain what linguistics really is. Sometimes they even tend to make curriculum specialists, elementary and secondary teachers, as well as English teachers unsure of themselves. The complexity of linguistics is not diminished by reading linguistic studies employing mathematical symbols and the logic of science as is sometimes the case. Still another cubit of breadth is added to the problem by the long-standing kinship of linguistics with the humanities' literary and art forms.

Perhaps, one of the most useful ways of explaining linguistics is to say that it is:

1. A *scholarly discipline* concerned with the nature of human language—with what speakers do with and know about their language—as well as with different grammar systems, dialects, and the like, AND . . .
2. A *behavioral science* with implications for classroom strategy in trying to induce behavioral change through the use of language, AND . . .
3. A *social science* as it establishes linkages between language and culture and culture and language.

The sprawling realm of linguistics: a diagram. Fortunately, for working effectively with children and youth, the teacher need not be an expert in all or even most of the aspects of this sprawling field of linguistics. Indeed, this would be impossible anyway, since linguists, themselves, tend to be thoroughly familiar with only certain specialties within their field.

This booklet presents a brief overview of the total realm in which the linguist works. The diagram, "The Major Divisions of the Field of Linguistics," on page 4 illustrates the linguists' domain.

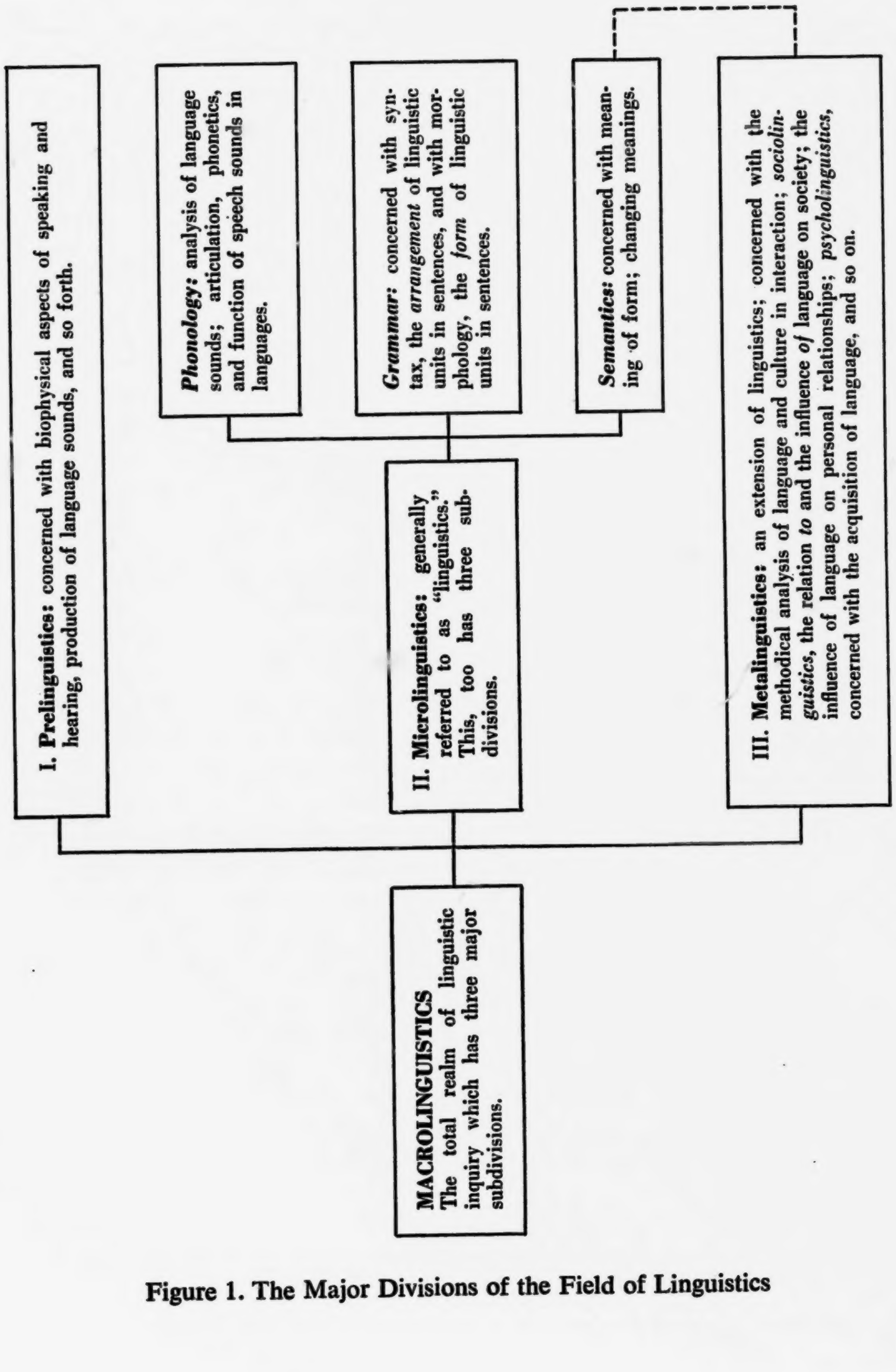
The whole, broad study of human language is called *macrolinguistics. Macrolinguistics* is then divided into three major areas of research and study: *prelinguistics, microlinguistics,* and *metalinguistics.*

Prelinguistics is concerned with the physiology of speech and the physics of sound. It contributes to our understanding of problems of speech and hearing pathology which constitute the work of the speech correctionist.

Microlinguistics is concerned with phonology, grammar, and semantics—those understandings that teachers need to improve children's instruction in reading, spelling, and English usage.

Metalinguistics is concerned with the study of language and culture and the influence of language on culture and personal interactions—those understandings of thinking and concept development provided by the sociolinguist and the psycholinguist.

Metalinguistics opens the door between language and human behavior a little wider every year. As data accumulate, metalinguists will become increasingly important in helping teachers understand how human



MACROLINGUISTICS
The total realm of linguistic inquiry which has three major subdivisions.

I. **Prelinguistics:** concerned with biophysical aspects of speaking and hearing, production of language sounds, and so forth.

II. **Microlinguistics:** generally referred to as "linguistics." This, too has three subdivisions.

Phonology: analysis of language sounds; articulation, phonetics, and function of speech sounds in languages.

Grammar: concerned with syntax, the *arrangement* of linguistic units in sentences, and with morphology, the *form* of linguistic units in sentences.

Semantics: concerned with meaning of form; changing meanings.

III. **Metalinguistics:** an extension of linguistics; concerned with the methodical analysis of language and culture in interaction; *sociolinguistics*, the relation *to* and the influence *of* language on society; the influence of language on personal relationships; *psycholinguistics*, concerned with the acquisition of language, and so on.

Figure 1. The Major Divisions of the Field of Linguistics

behavior is influenced by language and how language mediates behavior.

However, among these three subdivisions of macrolinguistics, *microlinguistics* will be the major subdivision on which this booklet will focus. From now on the word, *linguistics,* unless otherwise noted, will be used to designate the research and theory in phonology, grammar, and semantics that are infusing English language arts programs in the United States.

Why Linguistics Is of New Importance to the Teacher

Major changes that affect the lives of both children and adults have taken place in communication. These changes are reflected both inside and outside the school setting.

The communications revolution. Human beings throughout the world are experiencing the influence of a revolution in communications which began several centuries ago with the impact of printing on Western Europe. Schramm has pointed, in vivid language, to what is happening. "Mass communication," he wrote:

> . . . flows like a creek, feeding the ground it touches following the lines of existing contours but preparing the way for change over a long period of time; sometimes finding a spot where the ground is soft and ready, and cutting a new channel; occasionally, under most favorable conditions and in time of flood, washing away a piece of ground and giving the channel a new look (274:23).

Since the 1940's man's means of transmitting and receiving messages has changed radically from dependence upon a slower and less personally involved means of communication—the printed word on paper and the spoken word on radio and telephone—to the more immediate and highly involved forms of communication found in televised messages.

Developments in cybernetics—the field of automatic control systems—provide an excellent illustration of how the floods of change are reshaping the nature of the "territory" of communications. As Karl and Margaret Smith (284) describe it, we find brain-like machines creating what promise to be increasingly fantastic mutations in our processing, absorption, retrieval, and dissemination of information.

Clearly, there is a critical need today to invest more of our time and energy in the scientific study of language. Nor is there much time to waste lest we lose ground in the race to keep up with change. One of the remarkable paradoxes of our time, as Hutchins (154:102) phrased it, is that as instruments of communication have increased in number and power, intelligibility has declined.

Linguistics in the classroom. The classroom teacher must understand the great leap forward which communication techniques have taken. He must also understand how the contributions of research workers and writers in linguistics relate directly to classroom practice. This, in turn, necessitates changes in the content and method of language instruction. Among some of the significant developments in linguistics are the following:

1. *New insights into the nature of language have been provided.* About 1950 linguists began to identify certain important concepts that had a direct bearing on teaching (131). By 1952 some of these basic ideas had been published for teachers in a report of the Commission on the English Curriculum of the National Council of Teachers of English:

- Language constantly changes in an orderly, desirable, predictable way . . .
- Change is normal and desirable . . .
- Spoken language is the only genuine form of language . . .
- Correctness depends on usage . . .
- All usage is relative . . . (282:275 ff.).

It should be kept in mind, as Gleason (104:23) has noted, that these points were popular formulations of the 'fifties. While linguists generally accept them as historical contributions, many scholars now would insist on considerable rewording and clarification. Some of these changes and refinements are reflected in the material in subsequent chapters of this booklet.

2. *New emphasis on and understanding of the structural analysis of language has appeared.* After 1952 there was fresh interest in structural grammar. This was foreshadowed by Leonard Bloomfield, a major figure in U.S. linguistics and the author of the definitive book, *Language* (1933). He advocated the use of a structural approach in the study of language—study of language through the classification of its outward form. Research by Charles C. Fries, undertaken in Michigan and reflected in his book, *The Structure of English*, began to influence classroom instruction after this volume was published in 1952.

3. *Pitch, stress, and juncture have been made the object of increased inquiry.* Linguistics advocates greater classroom experience with phonemic (or sound unit) studies of ways in which elements like pitch, stress, or juncture govern meaningful communication. A phoneme is a member of the set of smallest sound units of speech that distinguish utterances. Phonemic analysis seeks to discover what these units are in a given language; i.e., to determine distinctions in sound that give meaning to the listener and the speaker and distinguish one utterance from another.

Pitch refers to the extent, level, or intensity of a given speech sound.

Stress or "accent" relates to differences in the prominence of various parts of a word or sentence. *Juncture* separates segments of the flow of continuum of speech but seldom indicates anything about their relationships. These elements are explained and discussed more fully in Chapter II.

4. *A fresh look at some established viewpoints regarding grammar was taken by the "transformationalists."* Since Noam Chomsky published *Syntactic Structures* in 1957, "transformational-generative" grammar has shared the arena with structural grammar. These grammars have been in a virtual contest to determine what theories and research would contribute most to new teaching practices and change the classroom role of traditional or Latin grammar. The nature and applications of the new grammars are elaborated upon in Chapter III.

5. *Professional educators have begun to produce significant research findings in applied linguistics.* A too-little heralded development is the extent to which professional educators have begun to do research in the application of linguistics to the classroom. Especially since 1960, much important work has been under way. This activity should allow the theories and pure research in linguistics to be applied more widely and with greater wisdom in elementary and secondary school classrooms.

6. *Our concept of the role of traditional or Latin grammar—and the classroom models for instruction in the English language which it supported—has been drastically changed.* Methods of teaching reading, composition, oral usage, spelling, and so on are being reassessed and modified. Changes now under way suggest considerable redirection in the teaching of the English language arts.

Implicit in the points made above is a reply to the question, "Why is linguistics important to the classroom teacher?" In general, it is hoped that linguistics will help us find better ways of developing and using our communication skills. In particular, linguistics appears to have provided the road signs and milestones that mark the road toward new English instruction practices. They may prove in the long run to be as significant as "new mathematics" or "new science" in contributing to conspicuous outcomes of curriculum reform. This is consistent with trends bringing educationally promising ideas from related disciplines into the elementary and secondary school curricula.

A Darkling Plain Lightens

Once problems have been identified and new goals have been set, there is a very human tendency to relax. While identifying problems and establishing goals are important tasks, they are beginning, not terminal. Moving from mere discussion to the actual utilization of research and theory is equally important. Without the field testing of hypotheses, desirable changes in the English language arts curriculum will not occur. Ideas must be tested, and practice must reflect the best ideas.

Some problems to be faced. As the preceding pages of this monograph have suggested, the road to improved classroom teaching through the application of linguistic theory will probably not be a smooth one. Teachers and administrators must make a determined, thoughtful, and methodical approach to the improvement of the English language arts curriculum. This is not the time for a halfhearted, hasty, or faddist approach to program change.

Some of the problems with which the schools must cope in planning for change are summarized below. All need to be carefully considered and studied before action is taken.

1. The field of linguistics is very broad and, in addition, linguistic terminology is both complex and confusing.

2. In certain matters linguists do not agree completely among themselves on the terminology, interpretation of research, and the theories which are in competition. The question of "Whose linguistics is best?" has not yet been answered.

3. The linguist may not know much about children or about planning for their education. Not many linguists are qualified to serve as educational consultants regarding what classroom methods and materials are best. Their recommendations should be adopted only as informed professional teacher judgment suggests and not be swallowed without careful previous digestion.

4. The hastily prepared teacher "specialist-in-linguistics" sometimes merely helps a faculty make wrong choices more rapidly. Frequently teachers or consultants jump on the "linguistics bandwagon" with too poor a grasp of the content of linguistics to deserve a seat.

5. Many teachers leaving the colleges and universities today are not informed about research in linguistics or its application in practice. This is the fault of both professors of linguistics and professors of education—one emphasizing pure research, the other applied research—with too few concerned about both aspects of the problem—theory *and* field testing.

6. Although problems and subproblems can be listed to the point of tedium, one last item merits inclusion. This is the problem of a possible return to "pattern teaching" through ready-made or canned programs bearing a "linguistics" label. Teachers will be putting their blue chips on the lowest of cards if, in confusion over what the "linguistics approach" is, they relinquish their leadership in language arts or reading instruction to a "new" program of unproved value. According to Ives (158), the danger is particularly great with respect to ". . . using some of the adaptations of transformational-generative

grammars, which, so far, are quite fragmentary but are presented as comprehensive."

In his "Dover Beach" (1867) Matthew Arnold left us the famous lines:

> And we are here as on a darkling plain,
> Swept with confused alarms of struggle and flight,
> Where ignorant armies clash by night (185:1181).

Teachers of English, at this point, may feel that they, too, stand groping on a darkling plain. There *has* been some confusion and an ephemeral alarm or two. But here the analogy ends.

No "ignorant armies" clash by night. Instead, two competent teams of specialists in the study of human language and of education stand ready to build a foundation for better teaching of communication skills in English. Despite some problems that remain, the darkness of confusion seems gradually to be disappearing.

Overview of following chapters. In the following chapters, *Linguistics and the Classroom Teacher* will try to close the gap between present knowledge and practice as they involve linguistics. Basic terms used by linguists and useful to teachers are reviewed in Chapter II, and an overview of the history of man's study of language is presented in Chapter III.

In Chapters IV and V attention is directed toward some of the questions that directly concern teachers: "What does the 'New English Education' suggest for work in the classroom; what does research say about applying linguistics; and what are some good books that provide information on the topic?"

Perhaps with more temerity than wisdom, Chapter VI draws upon the research and opinion cited earlier in the manuscript to offer conjectures as to where we may be heading in the development of language skills during the 1970's.

Chapter II

Breaking the Linguistic Language Barrier

WHILE language has often been called man's greatest invention, he has not always been adept in using this creation. Furthermore, the problems of conveying and interpreting messages are old ones. As Lee has noted, our present concern with human communication goes back to ancient times, since rhetoric, logic, and poetics are among our oldest academic disciplines (177:xiii).

Determining the meaning of meaning has long been difficult and language, at best, is but a frail vessel for conveying accurate meaning. Robert Graves, the distinguished classical scholar, has cited examples to illustrate ". . . that translation is a polite lie, but nevertheless a lie" (116:74), and Kouwenhoven argues convincingly that one cannot even accurately "translate" English into other English words (168). The magnitude of the communication problem has led to the publication of numerous books and articles ranging from the popular to the scholarly. They further give testimony to man's lack of skill in using his "greatest invention" with prudence, deftness, and integrity.

The language barrier in linguistics. Students of languages themselves note that the teacher's understanding of linguistics is impeded at present by a formidable language barrier. Two elements seem to have created this barrier. One is the technical vocabulary used by most linguists (211). The other is the existence of various schools and numerous specialties within the ranks of the language scholars.

The problem is serious enough to justify an examination of linguistic terminology before presenting the historical backgrounds of the science of linguistics. At first glance it may seem illogical to examine terminology before describing historical developments in Chapter III. In the next few pages it should become apparent that the linguists' vocabulary needed to be explained in order to make Chapter III easier to read.

Why the barrier remains. The jargon of linguists and their numerous specialties suggest causes of the difficulty found in reading linguistic writings, but why has the barrier not been removed? Several explanations can be given:

1. Until recent years most teachers had little or no knowledge of linguistics as a means of improving teaching in the mother tongue. Few scholarly students of language bothered to address themselves to teachers.

2. Writers using a popular style in the manner of H. L. Mencken in *The American Language* were informative and interesting but they did not concern themselves with the significance of linguistics for improving classroom content or methods. Popularizers such as Lincoln Barnett or Mario Pei did virtually nothing to explain many basic terms.

3. Rapid changes in the field of linguistics, changes having a direct bearing on education, occurred for the most part after 1950. As a result, language arts and English education courses have only recently begun to give more than passing attention to the scientific study of language and to its technical vocabulary.

4. Particularly in such specialties as structural or transformational grammar, complex ideas have been expressed in complex ways, sometimes through the use of quasi-mathematical symbols.

Teachers, therefore, have faced double tasks: first, that of *building a background;* second, that of *acquiring information.* This undoubtedly discouraged some of their efforts to surmount the barricade created by terminology.

How To Read Linguistic Writing

Some useful suggestions can be made to elementary and secondary teachers and to curriculum workers with respect to reading books and articles, beyond the level of popular magazines, which treat linguistics:

1. Decide what you think you need or want to know in order to do a better job as a teacher and to acquire the "security of knowledge" upon which self-confidence rests.

2. Accept the fact that a reasonable amount of drudgery is necessary to acquire a modest, basic linguistic vocabulary.

3. Decide what *not* to read first and what you may not want to read at all. Some books and articles are not designed for the beginner. *Syntactic Structures* by Noam Chomsky is a recognized milestone in linguistic theory but not the most useful book in which to make a start.

4. Don't pretend to have knowledge you don't have. Ask for help from those who know the field. Share your readings and thoughts with other interested teachers.

5. Keep pursuing the study of the vocabulary you need. After a while, many disparate bits and pieces will begin to fit together in a kind of *Gestalt.*

You don't need to speak the language . . . but! A blurb used by travel agents as they sell "21-day special" package tours to Europe is that "You don't need to speak the language." *But*—what a help it is to know a language other than English well enough to converse in it! The same point applies to linguistics.

Knowing perhaps two dozen terms (e.g., phoneme, syntax, morpheme) will make it easier to travel through the realm of new developments in mother tongue instruction. However, on the assumption that you will want to know the terminology well enough so that added meaning will be given to linguistics, a brief introduction to its vocabulary follows.

Some Meanings in Linguistics

Selecting a basic linguistic vocabulary for the curriculum supervisor or the English language arts teacher when whole dictionaries and glossaries have been published is a challenge. Therefore, the material which follows was selected only after careful study of the terms used in approximately 350 books and articles. Also, definitions were reviewed by linguists to determine whether they felt these terms were both worth including and suitably defined.

Since some special terms such as *grammar* involve diverse concepts, this word is discussed rather than defined. Others such as *comparative linguistics* are explained and others are merely listed in the glossary at the end of this booklet. The items included obviously are not comprehensive. They should, however, be useful and have been checked by various specialists in linguistics to ensure accuracy of meaning.

Major divisions and specialties in linguistics. Chapter I presented a diagram which, in simplified form, illustrated the major divisions of linguistics. A closer look at the terminology used in the diagram provides a suitable start in one's vocabulary development since words like *morphology* and *semantics* were introduced but not explained in any detail.

We have said that the work of linguistic scholars reflects the fact that they are in a field which is a discipline, a behavioral science, and a social science. Students of language sort themselves into persons who study the *history,* the *structure,* the *sociology,* and the *geography* of language. *Psycholinguistics,* concerned with the acquisition of language, has assumed increased importance since transformational-generative grammar set itself the specific task of finding a model that would explain this acquisition. *Meaning* and the relationship between *learning* (or education) and language are also subject to study.

The label, *historical linguistics,* needs little if any interpretation. Furthermore, the next chapter, which traces the development of linguistics, reviews the historical approach. Closely related to and interactive with the history of language is *comparative linguistics*. Here research workers compare two or more languages, for example, in the quest for *cognate* words which have family resemblances such as *coeur* (French), *corazón* (Spanish), or *cuore* (Italian). All of them mean "heart" in these three tongues.

Structural linguists are concerned with the status—past and present—of languages as they are spoken. It is self-evident that historical, structural, and comparative linguistics overlap and interrelate. The *sociolinguist* is concerned with the influence of language on society. The *geography* of language involves the scientist in social and regional *dialects* as well as the world-wide study of language families: the Indo-European (or Indo-Hittite), Semitic, Sino-Tibetan, Japanese-Korean, and many others splintering down to 1,200 or more American Indian tongues.[1] *Descriptive* linguists interest themselves in structure as well as in anthropological studies involving language.

Mirrored in the paragraphs above are the vocabulary problems already noted. The overlap among specialties, linguists' different terminological preferences, and new interdisciplinary relationships combine to make any further clear-cut distinctions hard to draw among the divisions in the study of language.

Linguistics and the classroom. Some divisions and specialties of linguistics such as prelinguistics and metalinguistics are not immediately related to reading, spelling, usage, writing, and similar aspects of teaching in the language arts. Perhaps most important for teachers interested in the methods and materials of better instruction are the studies linguists have made with respect to the *sound* (or phonology), the *form* (or grammar) and the *meaning* (or semantics) of the English language.

Some important terms related to phonology, syntax, and morphology. The words: phonology, phonetic(s), phonemic(s), and phoneme are used often enough in linguistics to deserve remembrance.

Phonology is a field concerned with speech sounds. Historical phonology deals with the theory of sound changes in a language. Descriptive phonology deals with contrasting functions of language.

1. *Phonetics* is sometimes used synonymously with phonology.
2. *Phonetic* means of or pertaining to the physical aspects of speech; the sound of language.
3. *Phonemics* is concerned with the systematic use of the speech sounds in a specific language. It is also a technique for describing language.

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[1] See Appendix C for an inventory of "language families" around the world.

4. A *phoneme* is a significant unit of speech sound or an abstraction from a set of sounds. Although there is no complete agreement, we probably have about 45 phonemes in English; perhaps 18 to 70 in other languages. Of the phonemes in English, 21 are consonants; 9 are simple vowels; and the remainder are combinations (or "nuclei") of vowels and semi-vowels or consonants. An *allophone* is a variation (or a "realization" as some linguists say) of a phoneme which is restricted by the context in which it appears. The p's in "pit," "spit," and "lip" are allophones of the phoneme /p/.

An equally important term is *syntax*. This word refers to the order or construction (sentences, clauses, or phrases) in which words appear. Syntax, therefore, usually applies to *sets* of words.

Let us now turn to *morphology*. It comes from the Greek root *morph-* or *morpho-* meaning "form." It is the study of the forms of a language; of the meaningful units we call words.

1. *Morphophonemics* is concerned with the relation of syntax to phonemics —i.e., of word order to sound in language. In structural linguistics it applies to the phonemic modifications that accompany the addition or subtraction of morphemes. E.g., conspire—conspiracy in which "long i" becomes "short i."

2. *Morphemics* deals with the analysis of forms and how they enter into words.

Just as there are significant units of speech sound (phonemes) and their variants (allophones), so there are significant units of form—the *morphemes* and their variants, the *allomorphs*.

3. *Morphemes* are indivisible and significant units of form. Examples of units that cannot be subdivided are *girl, be,* and *-ment*. A "free morpheme" stands alone (e.g., *pin* or *cat*). A "bound morpheme" is dependent like "ex" in *ex*-governor or the "s" in pin*s*.

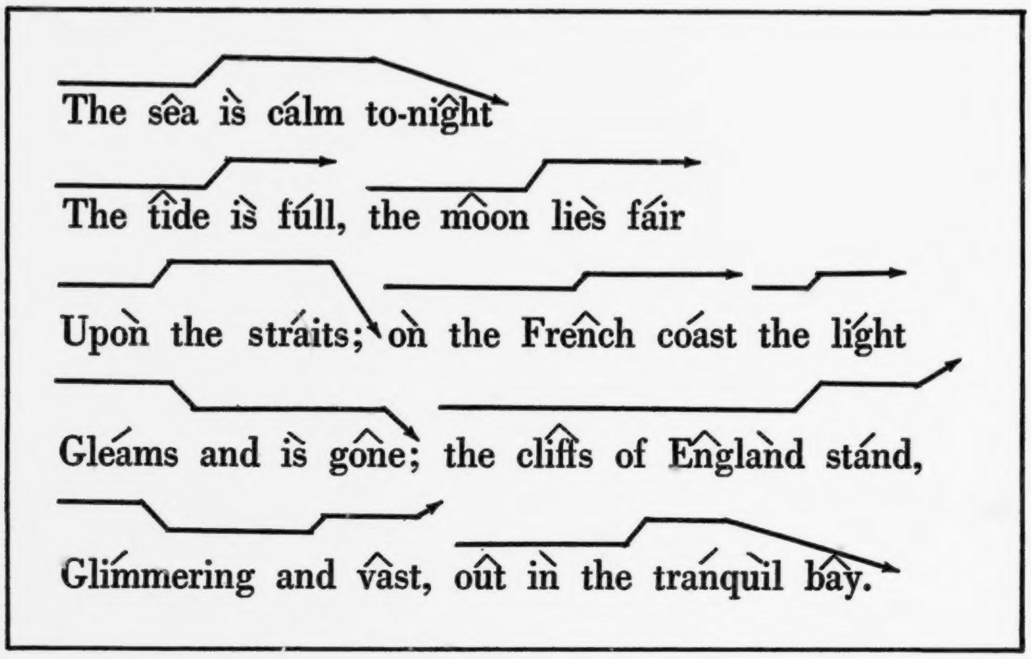
4. *Allomorphs* are one of two or more forms that a morpheme assumes at different points in a given language: the /z/ of dream*s*; the /əz/ of wish*es*.

Pitch, stress, and juncture. *Pitch, stress,* and *juncture* are terms used in connection with "suprasegmental" sound units. These significant sound units or phonemes are ones that extend over several segments of sound groupings.

Pitch refers to the extent, level, or intensity of a given speech sound. Changes of pitch make up intonations. Linguists have identified four phonemic pitch levels in English. Ascending pitch usually is represented by numbers, thus: /^{1}, ^{2}, ^{3}, ^{4}/. One system of notation, however, reverses the sequence in which the numbers are used to indicate pitch levels, while other linguists prefer devices such as lines cutting above and below a line of type.

Stress or accent, like pitch, is a system of structure-signals in our language. Dictionaries use three degrees of stress, but most American linguists use four:

primary, *secondary*, *tertiary*, and *weak*. They are written / ´, ^, `, ˘ /. In actual use they look like this: Whêre's thĕ cárgò? This example is from Faust (85). (Also see Figure 2.)



The sêa ìs cálm to-nîght
The tîde ìs fúll, the môon lìes fáir
Upòn the stráits; òn the Frênch cóast the líght
Gléams and ìs gône; the clîffs of Ênglànd stánd,
Glímmering and vâst, ôut ìn the tránquìl bây.

Figure 2. Types of Pitch and Stress Notations Illustrated
The selection is from Matthew Arnold's *Dover Beach* (185).
Notations were made by Professor Sumner Ives. (See "Acknowledgments.")

Individual words ordinarily can be represented with three contrasts in stress. A fourth may become necessary to increase clarity in the context of a particular sentence. As Edward T. Hall points out in *The Silent Language*: ". . . in English the difference in the spoken language between green house (the color green), greenhouse (where plants are grown), and the Green house (house owned by Mr. and Mrs. Green) is solely a function of varying stress" (122a:120).

Juncture or transition refers to the "phonemes (units of speech sound) of juncture" that are used to help the speaker pass from one body of linguistic material to the next. It is juncture, for instance, which distinguishes "níght + tràin" from "níght + ràin" or "íće crèam" from "I′ scrèam." Juncture has been divided into four categories; junctures between stresses, transitions between minor breaks, rising intonations, and the voice fade-out or lowered pitch.[2]

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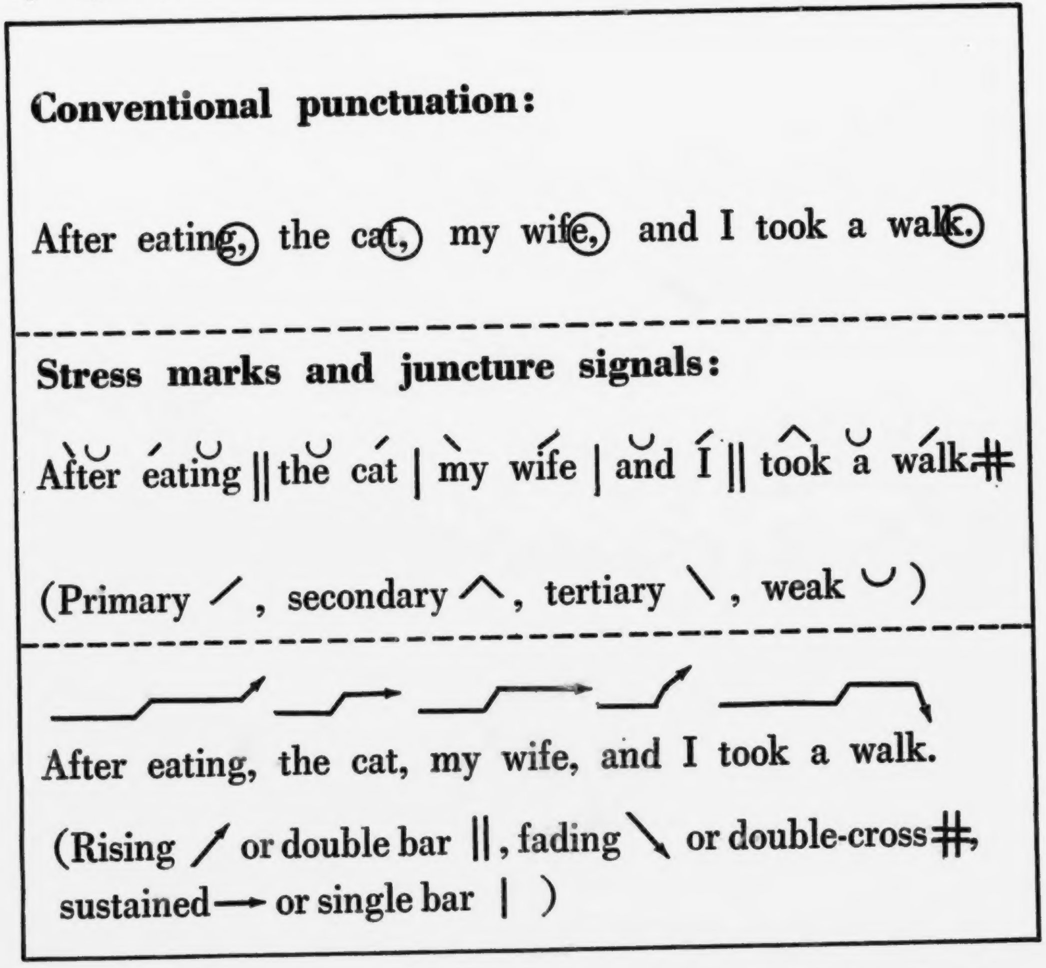
[2] The phonemes of juncture are presented here in highly simplified form for purposes of recognition only. The four categories are plus juncture /+/, single bar juncture /|/, double bar juncture /||/, and double cross juncture /#/, each appearing here as a linguistic symbol. Faust (85) provides an excellent treatment of juncture. Also see Chapter VIII in H. A. Gleason, Jr. (104).

In its more complex shades of meaning, juncture helps to distinguish the intended sense of such an ambiguous statement as: "After eating the cat my wife and I took a walk." The stress and juncture signals, as shown here, make clear that the cat survived to go on the walk. (See Figure 3.)

The terms introduced in this chapter should help the teacher read books dealing with language and articles appearing in journals such as *Elementary English, The English Journal,* and others concerned with applying linguistics in the classroom. The glossary on pages 104 to 110 at the end of this booklet provides additional vocabulary assistance. Also the appendices present such items as selections from the *I*nternational *P*honetic *A*lphabet (IPA), a sampling of symbols and conventions employed by linguists, and the terminology of speech sounds.



Conventional punctuation:

After eating, the cat, my wife, and I took a walk.

Stress marks and juncture signals:

Àftĕr éatĭng || thĕ cát | m̀y wífe | ănd Í || tôok ă wálk #

(Primary /, secondary ^, tertiary \, weak ˘)

After eating, the cat, my wife, and I took a walk.

(Rising ↗ or double bar ||, fading ↘ or double-cross #, sustained → or single bar |)

Figure 3. Conventional Punctuation, Stress Marks and Juncture Signals Illustrated as Means of Adding Clarity to an Ambiguous Sentence. (*Eating* is a gerund of a verb which may be transitive or intransitive. Here, followed by a marked nominal, it is interpreted *transitively*.)

Linguists' Interpretations of Grammar

Some terms such as *sentence, linguistics,* or *grammar* do not lend themselves readily to a brief definition or interpretation. One can only approach them through discussion. *Grammar* is an example of a "basket word" into which many ideas and viewpoints have been piled.

Because grammar is so often mentioned in connection with English education and because of its important role in the present "English Reformation," it is singled out for particular attention. Not only is it an "important" word; it is valuable as an example of some of the vocabulary problems encountered in the literature of linguistics. Also, the term illustrates the neutrality or lack of *inherent* meaning in a significant speech sound. For practical purposes, "grammar" may have whatever common meaning two or more persons accept when discussing the word in a given setting at a certain time.

"Grammar" is interpreted in many ways. When linguists write about grammar they remind one of the baseball umpire who was asked to explain the difference between his interpretations of *ball* and *strike.* "They ain't nothin'," the umpire snapped, " 'til I call 'em!" Let us take a look at the ways in which some linguistic umpires "call" the definition or meaning of this chameleon-like word.

BROWN, BROWN, and BAILEY (1958): "Grammar is the study of a system of language code symbols and the meanings that these symbols express" (40:212).

BOSTAIN (1966): "The organization of the noises is the grammar of the language" (35:21).

GLEASON (1965): [Grammar is] ". . . the art of speaking and writing English correctly (104:7) (Gleason was citing a 19th century viewpoint.) Elsewhere he notes, "We ordinarily think of grammar as rules stating what *can* go together. . . . But such statements are meaningful only if some other combinations *cannot* occur" (104:217).

MARCKWARDT (1958): ". . . grammar . . . has two quite different meanings . . . it refers to a body of prescribed usages characteristic of nonstandard English, combined with a complementary insistence upon the corresponding features of the standard language.

"In the second sense, the term *grammar* suggests the attempt to describe the structure of *a* language by means of a terminology and a series of concepts derived from the Romans and ultimately the Greeks . . ." (203:264).

CHOMSKY (1957): "The grammar [of a language] will thus be a device that generates all of the grammatical sequences . . . and none of the ungrammatical ones" (54:13).

CHOMSKY—Speaking of "generative" grammar (1966): It is ". . . the system of rules which establishes the relation between sound and meaning in the language" (53:593).

The six statements represent the variety of comments and definitions currently available. A few additional examples should suffice to drive home the point that word meanings vary with the purpose of the writer. *Webster's Seventh New Collegiate Dictionary* (1965) describes grammar as "the study of the classes of words, their inflections, and their functions and relations in the sentence," and, in a book designed for parents, Goldstein (1966) settles for almost the same wording in her glossary: "GRAMMAR —The study of language: classes of words and their forms, functions and relations in sentences" (108:189).

A few more examples serve to round out our pursuit of meaning.

HALL (1960) commented on rather than defined the term: "There is no such thing as good and bad (or . . . grammatical and ungrammatical . . .) in language" (123:6).

FRIES (1952): "The grammar of a language consists of the devices that signal structural meanings" (99:56).

LAIRD (1953): "Grammar . . . comprises whatever the users of a language do with symbols of meaning (in English, words) in order to express extensive and complicated meanings" (171:130).

No exception can be taken to any of the preceding statements. In a manner of speaking they are *all* "correct." The point we are trying to make is that elementary and secondary teachers seeking to learn more about linguistics and the improvement of teaching need not only to *learn* a few terms (e.g., morpheme or juncture) with special connotations: they also need to *interpret* and to make meaningful to themselves certain "special words." These are the kind of concept-words which one must understand in finding the meaning of meaning for himself. *Grammar* is one such example.

The interpretation of descriptive grammar made by W. Nelson Francis (1958) in his book, *The Structure of American English,* is one of the most helpful ones in print. His formal definition of grammar ". . . the branch of linguistics which deals with the organization of morphemic units into meaningful combinations larger than words" (94:223) is extrapolated with even greater clarity in his article, "Revolution in Grammar." In a few paragraphs Francis points out that "grammar" can be one or more of three things. His points bring greater clarity to each of the dozen definitions given above and are cited in full:

> The first thing we mean by "grammar" is "the set of formal patterns in which the words of a language are arranged in order to convey larger meanings." It is not necessary that we be able to discuss these patterns self-consciously

in order to be able to use them. In fact, all speakers of a language above the age of five or six know how to use its complex forms of organization with considerable skill; in this sense of the word—call it "Grammar 1"—they are thoroughly familiar with its grammar.

The second meaning of "grammar"—call it "Grammar 2" is "the branch of linguistic science which is concerned with the description, analysis and formulization of formal language patterns." Just as gravity was in full operation before Newton's apple fell, so grammar in the first sense was in full operation before anyone formulated the first rule that began the history of grammar as a study.

The third sense in which people use the word "grammar" is "linguistic etiquette." This we may call "Grammar 3." The word in this sense is often coupled with a derogatory adjective: we say that the expression "he ain't here" is "bad grammar." What we mean is that such an expression is bad linguistic manners in certain circles. From the point of view of "Grammar 1" it is faultless; it comforms just as completely to the structural patterns of English as does "he isn't here." The trouble with it is like the trouble with Prince Hal in Shakespeare's play—it is "bad" not in itself, but in the company it keeps (93:299 f.).

To round off our discussion of "grammar" as an example of a word for you to endow with meaning *for yourself,* it seems fitting to include one final definition from Robert Lowth: *"Grammar is the Art of rightly expressing our thoughts by Words."*

Lowth was the author of *A Short Introduction to English Grammar,* a book used at Harvard from 1774 to 1841. After surviving for two centuries, his definition, too, seems to merit a place among our interpretations —although no one can be sure just what he meant by "rightly." Also, our next chapter on the history of linguistics will show how Lowth and a few other 18th Century grammarians shaped much of the learning in British schools and in ours for a dozen generations!

Useful Words To Know: A Glossary

Preparation of the glossary. The glossary which concludes this monograph presents some of the technical words, uncommon words, or words with special meanings which are found in books on linguistics (e.g., *pitch*). A word was deemed eligible to be included whenever it was judged likely to be unfamiliar to classroom teachers and also likely to be used in discussions of linguistics with a bearing on classroom practices.

The definitions given were assembled from a variety of sources and checked both for clarity and accuracy by four linguists to ensure that the definitions were not "contaminated" by the simplification or rewriting to which most were subjected. Sources consulted on the meaning of terminology are given in the chapter references.

One final point. Readers quickly will note that certain terms are conspicuously absent. Among those missing are parts of speech such as adjective, verb, and noun. These and other terms were omitted for three reasons: (a) to avoid repeating definitions that already are adequately presented in standard dictionaries, (b) to avoid a longer list, and (c) to cope with changing viewpoints among grammarians who have raised the "complexity level" of some words beyond the point at which a few lines suffice to define or explain them in their linguistic contexts.

The preceding review of the diverse meanings attached to such a term as *grammar* illustrates why this word and similarly technical ones cannot always be handled adequately in glossary definitions.

Conclusion

Words and money. J. Donald Adams (2:8) has likened words to money. They both are subject to inflation and devaluation; they circulate and are withdrawn, are coined, lost, hoarded, squandered; their sharply milled edges become dulled with use—and some coins and words are even counterfeit! Undoubtedly the terminology of linguistics fits Adams's metaphor.

The words we have discussed, and those in subsequent chapters, are something to be accepted at face value and they lend themselves to our speculations as to the contributions of linguistics to the teaching of English. They also, in a few instances, may be "counterfeit" in the sense that they can deceive us if we do not examine them to determine their worth and our need for them before we use them.

Chapter III

Some Backgrounds of Modern Linguistics

EVERY field of human endeavor and scholarship has its own uniquely personal history. Usually, however, the story of how a particular science or discipline developed is neglected in conventional history books or compressed until many details and much flavor are lost in the abridgments of an encyclopedia. Scholars dealing with the history of language study, on the other hand, tend to give too much detail for the general reader. In Chapter III an attempt is made to follow a middle road which is neither a fragment lacking in detail nor a dissertation that provides more information than many teachers may care to absorb.

The "backgrounds of linguistics" material in Chapter III is presented for three reasons:

1. Historical information is needed if one is to understand why linguistics is influencing instructional practices at present.

2. Some knowledge of the historical development of linguistics presumably should be a part of the general culture of the professional educator—as should a knowledge of other fields such as the history of scientific developments in chemistry or physics.

3. An understanding of linguistic backgrounds not only enhances one's knowledge of his language; it provides the security that comes from being better informed on a topic currently under wide-scale discussion.

In the next several pages, then, we will move from the very early days of the scientific study of language to the stage in which linguistics finds itself in the 1960's.

Influential Figures in Times Long Past

Panini: Genius of Sanskrit. The origins of the methodical study and analysis of language are lost in the dim vistas of mankind's early history. It seems more than likely, however, that sophisticated work in grammar was under way in India at least 400 years before the Christian era. A tremendous genius named Panini is the first grammarian-language analyst of whom history has preserved substantial remembrance.

Panini was born at Lahur near the town of Attock. Today it is in West Pakistan and lies some 50 miles to the west of Rawalpindi. The old scholar worked with Sanskrit at Taxila University, once-great center of learning in Asia, and now a famous archaeological dig, which existed even before ancient Greece was tormented by the Peloponnesian Wars.

Language analysis must have reached high levels of development long before Panini, since Yaska, an 8th century B.C. grammarian, refers to Gargya, Galava, and Saktayana as masters of Sanskrit grammar before his time. In the tradition of meticulous analysis, Panini prepared his formal Sanskrit grammar which consisted of ". . . four thousand very brief statements of linguistic phenomena, most of them designated by arbitrary sounds or complexes of sound used as code words" (117:421).

Two thousand years later Sir William Jones, scholarly Chief Justice for the British in Bengal, was to write (in 1786) that the Sanskrit of Panini was more perfect than Greek, more copious than Latin, and more exquisite in its refinement than either. Today modern scholars concur that men like Panini and Patañjali (author of the *Mahabhasya* or *Great Commentary*) devised ". . . a grammatical description which even now has seldom been approached for completeness and precision" (104:30).

Contributions from Greece of antiquity. Along with the sage inhabitants of certain intellectual centers of the Indian subcontinent, the Greeks were among the great "thinking peoples" of ancient times. The nature and structure of language was a matter that did not escape their conjectures. Plato, around 350 B.C., held that language had stemmed naturally from the need to communicate. During the same era, Aristotle in *De Interpretatione* brought his great talents to bear on identifying several parts of speech. For example, he defined the noun as, "a sound significant by convention, which has no reference to time and of which no part is significant apart from the rest" (132:175).

But it is Dionysius Thrax who is generally credited with being one of the greatest influences on language, for the longest period of time, of anyone. A century before Christ was born he had produced a definitive Greek grammar. Dykema has said that Thrax's little *techne* has been called the most influential book in Western culture except for the Bible. "In it," Dykema continues, "are to be found virtually all the standard grammatical terms, and the classifications which he presented remain those of all standard grammar books" (77:139).

Thrax, who lived in Alexandria, Egypt, conceived of grammar very broadly as including poetics, rhetoric, and philology. He defined the parts of speech and made a major contribution by contributing to the concept of analytic procedure. Some familiar-sounding definitions chosen as samples from Thrax include:

sentence: a combination of words expressing a thought that is complete in itself

word: the smallest part of an ordered sentence (132:177).

Speaking of longevity, an English scholar and classicist, Gilbert Murray, has verified in his *Greek Studies* that Thrax's *Art of Grammar* was used as a basic text in a number of British schools even after 1850.

Donatus and Priscian. Writing in 4th century Rome, long after Thrax's day in Alexandria, Aelius Donatus prepared a highly influential Latin grammar which drew heavily on the Greek one written by Thrax. Both writers, for example, utilized eight parts of speech that were almost identical, and also analogous to the list we use in English today.

The ascendancy of the Church in the Middle Ages, and the close linkage between liturgy and Latin, plus the fact that it was the international language of literate men in Western culture for many centuries, made Donatus's Latin grammar even more influential. It found a place in the *trivium* of the medieval university and a corruption of Donatus's name, *donat,* for several centuries stood for any introductory Latin grammar in both England and France (166:130).

The importance of Donatus was enhanced by William Lyly who in the early 1500's wrote his Latin Grammar with the help of two collaborators. Since grammarians had been "borrowing" the material of their predecessors for many centuries, Lyly drew generously on Donatus. Other authors, in copying Lyly, quite naturally continued to preserve many concepts and definitions from the ancient Roman grammarian. We find clearly recognizable traces of Aelius Donatus in the English books in U.S. schools today. These have come into widespread use because of the influence of the 18th century grammarians on 20th century English books in the United States.

Priscian, who lived in the 6th century, modeled his writings, as Aelius did, on Dionysius Thrax which helped further to embalm the old Greek's system in the manuscripts written in the scriptoria of abbeys and monasteries for eight centuries or more.

The great Dante found a place for Donatus among the blessèd in *The Divine Comedy*. Priscian he relegated to Hell. European scholarship in recent years has explained the seemingly inconsistent treatment accorded these two eminent grammarians. Ironically, a mistranslation of Priscian's Latin cast doubt on his character and led to Dante's cruel error (77:139).

The Medieval Era

During the Middle Ages the lamp of learning guttered badly in the draughty corridors of cathedral and monastic schools and later in the universities—the institutions in which knowledge struggled to survive. "Schools" of the era were retrogressive compared to those of antiquity.

The trivium—logic, rhetoric, and grammar—of the medieval university kept the study of Latin and its literature alive. If it can be said that there was "linguistic study" during these centuries, it was confined to Latin. Since it was a living tongue, Latin underwent many changes in the process of becoming medieval Latin as distinct from the "classical" variety of ancient Rome. As might be expected, medieval grammarians modified the works of Priscian and Donatus in the process of describing medieval Latin and also reintroduced the categories of Aristotle into grammatical analysis (132:179-80).

Allen, in introducing the historical background of linguistics in his book of readings, suggests a useful way to designate or distinguish the Graeco-Latinate description of language, later made a part of British and U.S. speech by 18th century English grammarians such as Lowth, Ward, and Coote. He suggests that grammar in the Latinate tradition be classified as *Grammar A*, that the description of 19th century philologists be labeled *Grammar B*, and that the present day variety be referred to as *Grammar C* (5:2) Allen's labels may not appeal to the reader, but they are mentioned nonetheless because they make an important point. Grammar constantly is being reclothed in new descriptions as language goes through its inevitable widening spiral of change.[1]

The 18th Century English Grammarians

The Renaissance brought a quickening of interest in Latin and Greek as scholars turned their attention once more to the warmth and beauty of ancient Greece and Rome that had been preserved in classical writings. Insofar as significant developments in this methodical study of language are concerned, however, there is little that need be reviewed in a monograph, such as this one, between the high middle ages and 18th century England.

As an illustration of the sustained interest in linguistics during the 17th century, however, some passing mention should be made of the so-called Port Royal School of philosophical grammarians who worked near Versailles in the mid-1600's. Men such as Arnauld and Lancelot endeavored to make grammar a branch of logic and used presumably "logical" categories based on conceptualizing, reasoning, and judging. The Port Royal grammarians made a considerable contribution to the methods of grammatical analysis, particularly with regard to syntax.

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[1] For a definitive history of the Medieval era, cf. the scholarly work of R. H. Robbins, *Ancient and Medieval Grammatical Theory in Europe*. London: Bell & Company, 1951. A first-rate summary of the history of grammar is given in the early pages of Robert C. Pooley, *Teaching English Grammar*. New York: Appleton-Century-Crofts, Inc., 1957. Cf. pp. 1-32.

Grammar in 17th century Britain. Until the 1600's, as used in England, the word "grammar" referred only to *Latin*. The British secondary schools which prepare students for the university have retained the label "grammar schools" to this day because of the traditional stress on Latin in their programs.

Ben Jonson, writing in the early 1600's, is credited by the *New English Dictionary* with developing one of the first grammars to deal with the English language. His *English Grammar* (1640) foreshadowed the great, almost obsessive interest in "correctness" in language usage which flourished during the 1700's.

The era of prescription. An exaggerated interest in grammar was one of the characteristics of 18th century social history in England. This has been attributed to the appearance of a class of people with time for leisure which the beginnings of industrialization and urban growth made possible (249:3). The pursuit of culture by the newly rich in this group was reflected in the "Beau Nash tradition" of absurd over-refinement in dress and manners, and affectations in language as well. This social climate created or at least supported an environment in which the prescriptive grammarians became important guardians of the now-discredited doctrine that there is a fixed and "right" form of speech.

Among the 18th century grammarians, mention often is made of such notable men as Robert Lowth, Lindley Murray, Joseph Priestley, and George Campbell (309:9). Like Ben Jonson a century earlier, the 18th century writers, except for Priestley, tended to be influenced strongly by Latin models and concentrated on etymology, syntax, orthoepy (pronunciation), orthography, and prosody. In anticipation of G. B. Shaw's Professor Henry Higgins, Lowth and his contemporaries set out to teach proper English *to the English*. According to Bloomfield, they concluded that the structure of various languages, but particularly Latin, embodied universally valid canons of logic (29:6). In the quest for assumed logical principles governing usage and syntax, many rules were based to some extent on Latin.

Because change is natural in language it was impossible for Lowth and his fellows to freeze English. Also, they were sometimes illogical and intuitive in their prescriptions, and substituted explanations when rules could not be made to fit. *A Short Introduction to English Grammar* (1762) by Lowth is perhaps the most memorable of the volumes produced by the 18th century school of grammar. Lindley Murray, who was an American, based his 1795 grammar[2] on Bishop Lowth's. The 200 or more editions of Murray's grammar firmly established what H. L. Mencken called the rigid patterns of English usage that combated the ". . . expansive gusto which made for its pliancy and resilience in the days of Shakespeare" (217:93). The "Era of Prescription" had begun.

Comparison and Description of Languages in the 19th Century

Authorities in linguistic science trace the methodical comparison of language back to the 1700's. In 1786, for example, Sir William Jones, of whom mention already has been made, was writing on the basic similarities between Sanskrit and both Greek and Latin. In 1799 a little-known scholar named Gyármathi published what can be considered the first modern treatise on comparative linguistics. Since he compared Hungarian and Finnish, which were not popular subjects of study among European scholars, little note was taken of his work at the time.

19th century comparative linguistics. The discipline of historical linguistics or comparative grammar established itself in European scholarly circles particularly as a result of the work of three men:

1. Rasmus Rask who in 1814 completed an essay (published in 1818 or 1819), in which he suggested the relationship between Icelandic and certain other tongues of northern Europe.

2. Franz Bopp who published (1816) an important work comparing conjugations in Sanskrit with Persian, Greek, Latin, and German. Because he wrote in German, Bopp's work was read more widely than Rask's Danish essay.

3. Jakob Grimm, of fairy tale renown, who shared fame among children with his brother, Wilhelm. Jakob's *Germanic Grammar* (1821) introduced techniques in the comparative study of languages. He also began (1837) the *Wörterbuch,* a great historical dictionary comparable to the *Oxford English Dictionary* which was undertaken in 1858 and completed in 1928.

By the middle of the 19th century, the history of words and sounds had been worked out for many languages and the changes traced with monumental patience. After 1822 "sound laws" were devised to explain relationships between pronunciations in an earlier and later language and in cognate words of related languages. Jakob Grimm proposed and stated the first sound law and it has borne his name ever since.

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[2] It was entitled *Grammar of the English Language Adapted to the Different Classes of Learners.*

Karl Verner is another name associated with sound change, and a paper he wrote in 1875 introduced even higher standards of scholarship in language study. Much work in linguistics during this period was done by a group called the *Jung-Grammatiker*—the Neo-Grammarians—among whom Leskien was a prominent figure. Between 1875 and 1925 the field of phonetics developed, extensive study was made of unwritten languages around the globe, and the concept of linguistic geography (*who* speaks *what* variety of *which* languages *where*) came into being.

Linguistic geography. Sometimes linguistic geography is called "area linguistics" or even "dialect geography." It is a form of applied linguistics that has been highly developed since the late 1800's. The study involves examining the regional or area distribution of language.

The first major venture in the geography of language was undertaken in the 1870's by Georg Wenker who published a *Sprachatlas des Deutschen Reiches.* Other early contributors were two Frenchmen, Egmont Edmondt and Jules Gilliéron, who produced their *Atlas Linguistique de La France* between 1902 and 1910. They recorded spoken language in over 600 French speaking towns and villages in Europe and drew over 2,000 maps showing certain regional linguistic characteristics. Similar work has been done subsequently by U.S. scholars, *The Linguistic Atlas of New England* (1939-1943) being one such product.

Descriptive linguistics. While there was considerable descriptive work done in linguistics before 1900, it was less organized, less conspicuous, and carried with it less university-level prestige than did historical linguistics.

Speaking of descriptive activities during the past century, Gleason tells us that:

> Large numbers of grammars and dictionaries were compiled. Many were never printed because of low interest, but the list of published works is impressive. Most of the authors followed rather closely the patterns familiar to them in European and classical languages. Many, however, . . . knew the languages they were describing so well that they . . . refused to distort the material enough to fit it into the conception of a grammar which they had brought with them from Europe (104:38).

Insofar as teachers in the elementary and secondary schools are concerned, the importance of descriptive linguistics resides in the phonological (sound analysis) description of modern languages which indirectly bears on such activities as reading instruction and spelling. We are indebted to Karl Verner for this work with the "sound law" concept and to the ideas and studies of the neo-grammarians, to students of phonetics, and to the dedicated persons who worked on various regional language studies in remote places and who frequently were missionaries.

Out of their efforts—which expanded earlier work by the Prague School—grew the concept of the phoneme as a basic sound unit. In turn, the phoneme provided a foundation for developments in descriptive linguistics in the United States which carried through the refinement of theory and application in structural linguistics often associated with scholars like C. C. Fries. The importance of the phoneme as a basic "building block" in the structure of language was unquestioned until the late 1950's when the proponents of transformational-generative grammar became articulate.

It is helpful to remember that descriptive linguistics actually has a dual function. One is the *description* of a given language; the other is to provide a *theoretical foundation* for the study of the structure of language. Although both functions or tasks are historically relevant, it is the second one that is the more closely linked to the classroom teacher's instructional activities.

Only Yesterday: Linguistics from 1900 to 1950

After 1900 the scientific study of language became so diverse and complex that a monograph such as this one can only touch on a few historical developments that are either of peculiar interest or directly related to changes that are beginning to influence instruction in the mother tongue.

Anthropological linguistics. Because it was a training ground for a number of U.S. linguists of stature, passing mention should be made of U.S. anthropological linguistics. Interest in the numerous American Indian languages goes back to the Colonial Period when John Elliot produced the first Bible ever published in North America (1664)—and it was written in an Indian tongue. It was not until after 1899, however, when the distinguished Columbia University professor, Franz Boas, was appointed, that anthropology began to come of age.

Boas clearly recognized that language and culture were inseparable, and under the influence of his tremendous, productive personality many students were introduced in depth to the science of language. Edward Sapir (1884-1939), one of the great figures in linguistics, was a Boas pupil. Sapir, after long study of the language of American Indians, concluded that traditional grammar was largely inapplicable. His book, *Language* (1921), reappraised certain linguistic "principles," reflected his precise descriptivist scholarship, and strengthened the viewpoint that language was not a matter of inflexible French Academy "correctness" but was a changing, emergent element in a given culture. It was under the joint leadership of Sapir and Bloomfield that the phoneme theory became accepted in the U.S.

Since few languages, other than the standard ones of Western culture, were taught in our schools and universities prior to World War II, the anthropological linguists were a great resource in developing massive exotic language education programs for troops going to Asia, to Africa, and to the Pacific islands. Because of the linguists' "phonetic know-how" and their acceptance of the primacy of speech, it was a relatively simple matter to create materials for *spoken* language instruction, even with respect to languages that were virtually unknown in the west. Foreign language teaching today is the beneficiary of the methods and materials devised by linguists in the war period.

General developments. During the first half of the 20th century the several subdivisions of the science and discipline of linguistics continued to make steady progress. These components were: (a) comparative (or historical) linguistics, (b) the geography of language (including dialects), and (c) descriptive linguistics as indicated by the section headings in Chapter III. A few significant developments of the period 1900-1950 not already noted are summarized below.

1. Otto Jespersen (1860-1943), the great Danish philologist, was awarded the Volney Prize of the Institut de France for his *Growth and Structure of the English Language* which appeared in 1905. This widely read volume is a useful résumé of chronological changes in English.

2. The great Swiss linguist Ferdinand de Saussure began formulating some of the principles of structural linguistics (1906). His lectures (reconstructed after his death in 1913 by his students) were assembled during 1915 and appeared in 1916 with the title *Cours de linguistique générale*. They are considered important in the development of structural linguistics. It was de Saussure who drew a distinction (in French) between *langue* (the *system* or patterned structure of a language) and *parole* (actual speech), which helped to provide a basis for descriptive linguistics in Europe.

3. Edward Sapir (1884-1939) wrote *Language* (1921) as mentioned above. This was followed by *Sound Patterns in Language*, a 1925 paper which stimulated interest in structural linguistics.

4. Nicholai S. Trubetzkoy (1890-1938) firmly established the principle of the phoneme in his *Principles of Phonology*,[3] posthumously published in 1939.

[3] The book is also referred to as *Foundations of Phonology*. The original German title was *Grundzüge der Phonologie*.

5. Alfred Korzybski in the 1920's began the development of his thesis regarding ". . . the dependence of 'human nature' on the structure of our languages. . . ." (167:258). The Polish logician is associated with *general* semantics (as distinct from semantics as a branch of philology concerned especially with historical changes in the meaning and significance of words and phrases). Irving Lee, S. Hayakawa, and Wendell Johnson were among men whom he influenced. Johnson defined Korzybski's general semantics as ". . . a systematic attempt to formulate the general method of science in such a way that it might be applied not only in a few restricted areas of human experience, but *generally* in daily life" (162:33). Irving Lee credited Korzybski with formulating a theory and method which gave a proper evaluation wherever language is used (176:17-18).

6. Leonard Bloomfield (1887-1949) brought his great powers in historical and descriptive linguistics to bear on the task of writing what became a distinguished and widely accepted handbook for U.S. linguists. This was Bloomfield's *Language* (1933). Geographical, historical, and descriptive knowledge—up to that time in the scientific study of language—was presented with a brilliant touch and with creative *innovations included.*[4]

Linguistics Since Midcentury

Emerging premises. Although there was some lag in many classroom teachers' knowledge of the fact, by 1950 the developments in linguistics which are reviewed above had clearly reached a stage at which traditional grammar, "standards" of usage, and many conventional practices in mother tongue instruction could be subjected to vigorous criticism. At least 10 general premises had been advanced by linguistics scientists and were being successfully defended from the traditionalists by the 1950's. It seems worthwhile to examine these premises[5] since they are important aspects of the foundations of the "quiet reformation" in the teaching of the English language arts (96:30-37).

1. Language and culture are intimately related. Each shapes the other.

2. Although they are intimately related, like the three legs of a stool, the *sounds* of a language are its basic features, not the words or the grammar.

3. "Correct" language is the current spoken tongue of the people who use it. There are *non*standard words and phrases at a given time, but there are no *sub*standard ones.

4. Dialects in time may become standard languages. French, Spanish, and

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[4] As recently as 1966 some British linguists of the writer's acquaintance spoke of "Bloomfield Linguistics" as if it were synonymous with U.S. Linguistics.

[5] Many of the points listed here were suggested by an article prepared by Charles C. Fries, "Advances in Linguistics," *College English* 25:30-37; October 1961. Reprinted with the permission of the National Council of Teachers of English and Charles C. Fries.

Italian, for instance, began as dialects of spoken Latin. Dialects, by the way, are not vagrant or ignorant departures from standard usage. A dialect may reflect and preserve old or conservative forms from years gone by.

5. A language is in a constant state of change. Coinages, loan words or borrowings, and developments in society itself (e.g., new social and scientific inventories which involve novel terminology) testify to the dynamic nature of language.

6. Changes in the phonology and grammar of a language are regular and systematic, not accidental, and can be traced over long periods.

7. Our great historical dictionaries clearly reveal that it is the rule rather than the exception for words to have more than one meaning. Except for technical and scientific terms (aspirin, telephone, transistor) words in various languages do not precisely coincide.

8. Language functions as a system of interrelated patterns or structures not as isolated sounds strung together. No language item, linguistically speaking, has any significance out of the context of a language system.

9. Through the study of physics and the physiology of sound, many of the nuances of human speech can be identified, described, and reproduced by specialists in phonetic research.

10. The sounds of one language are not inherently more difficult than the sounds of any other, but the neural and muscular conditioning resulting from learning one's native language makes learning another increasingly difficult as one grows older. If, for example, a particular difference in sound does not function in one's language, it is very difficult for him to hear this difference in another language. Therefore, if it is difficult for him to hear a difference, it is difficult for him to produce it. Thus, speakers of Spanish do not distinguish the phonetic difference between *sheep* and *ship,* for these two English vowels are not distinct in his own language. Similarly, a person who speaks a dialect of English in which *hoarse* and *horse* (or *four* and *for*) are pronounced the same has difficulty in hearing the difference when made by persons speaking a dialect in which these words are not pronounced the same. (One wonders how much effect this has on tests of auditory discrimination.)

Linguistics and communications theory. Although it is too early to write with confidence, at least some attention must be given to the way in which linguistics is broadening in the 1950's and 1960's to accommodate itself to the concept that *living itself is in many ways a matter of communication.* This brings us to the threshold of supralinguistic and metalinguistic study which is beginning to occur under the rubric "communications theory," a label which is being applied to the work of scholars who wish to broaden the science of the study of language as it existed at mid-century. "Communication," they contend, "is far more comprehensive than language" (280:3).

At least three varieties of research workers seek to explore and to expand our present knowledge of communication. These include mathematicians, social psychologists, and linguistic anthropologists.[6] The mathematicians (often prepared in engineering and theoretical physics) are concerned with telecommunications engineering or *electronic* communications signals, and the social psychologists with language as a form of behavior as one interacts with the human signals that are interchanged. As distinct from the social psychologist working in *his* culture, the linguistic anthropologist is absorbed in the investigation of the encoding and decoding of communications symbols on a *world-wide* basis, be they Urdu or Swahili, English, or Korean.

But instead of peering further along the shadowy research trails leading into the next decade, let us now conclude our glance at past history and the current scene by examining how linguistics promises to influence mother tongue instruction. This brings us to the part of historical backgrounds that concerns classroom practitioners most. What has happened, say since 1950, to bring about the "quiet reformation" in practices?

The Present Scene

This concluding section of Chapter III not only rounds off historical backgrounds, it serves as an introduction to Chapter IV, where implications for changes in classroom practice are presented.

For purposes of simplification, the period since 1950 will be discussed here in terms of two topics, (a) the structural or "linguistic" approach to teaching English and (b) transformational-generative grammar which is, of course, also a "linguistic" approach, but slightly more recent.

In Chapter I, six problems in the so-called linguistics approach were identified. (See pages 8-9.) Lest these seem imposing impediments, and lest the unfamiliar terminology, formulas and quasi-mathematical constructs of some language scholars seem downright alarming, one point must be made at the outset. A teacher does not need to understand Einstein's formulas to grasp the idea of what atomic energy can do. He does not need to grasp the complex calculations involved in sending a space vehicle to photograph Mars to appreciate what has happened. Neither does he need to understand the mass of linguistic theory in order to apply the ideas on which contemporary procedures in teaching grammar are based.

[6] For a useful discussion of the points touched on here see Alfred G. Smith (280:1-10).

In all fairness, it must be added, as two professors of linguistics who read this monograph in manuscript form pointed out, that classroom materials designed to help teachers have sometimes been too dogmatic and too extravagant in their claims. Also, these materials often have been too little concerned with applications. "It has been a case of too much too soon by people who know too little" (158:8).

Structural grammar and the teaching of English. It was not until 1951 that a reasonably workable description of the phonology of American English (one made within the framework of U.S. descriptive linguistics) appeared. This was *An Outline of English Structure* by George L. Trager and Henry L. Smith. In certain respects this book is a capstone on work in linguistics since Bloomfield (104:82f.). Trager and Smith gave careful heed to juncture, stress, and pitch in our sound system and in a few years their book—up to a point—was recognized as a standard work.[7] It was the work of Charles C. Fries, however, that became closely identified with changes in classroom instruction. During the 1950's and early 1960's when English teachers spoke of the "linguistic approach" the chances are excellent that they were referring to applications of Professor Fries's ideas.

A Professor of English at the University of Michigan, Fries endeavored to build a new approach to the grammar taught in U.S. schools. W. Nelson Francis has described Fries's work so succinctly that his comments are cited at length:

> If one clears his mind of the inconsistencies of the traditional grammar (not so easy a process as it might be), he can proceed with a similarly rigorous formal analysis of a sufficient number of representative utterances in English and come out with a descriptive grammar. This is just what Professor Fries did in gathering and studying the material for the analysis he presents in the remarkable book to which I have already referred, *The Structure of English*. What he actually did was to put a tape recorder into action and record about fifty hours of telephone conversation among the good citizens of Ann Arbor, Michigan. When this material was transcribed, it constituted about a quarter of a million words of perfectly natural speech by educated middle-class Americans. The details of his conclusions cannot be presented here, but they are sufficiently different from the usual grammar to be revolutionary. For instance, he recognizes only four parts of speech among the words with lexical meaning, roughly corresponding to what the traditional grammar calls substantives, verbs, adjectives, and adverbs, though to avoid preconceived notions from the traditional grammar Fries calls them Class 1, Class 2, Class 3, and Class 4

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[7] Space precludes giving merited recognition to many research workers, theorists and writers: e.g., Archibald Hill for his controversial analysis in *Introduction to Linguistic Structures* (1958) and Eugene A. Nida for his *A Synopsis of English Syntax* (1960).

words. To these he adds a relatively small group of function-words, 154 in his materials, which he divides into fifteen groups. These must be memorized by anyone learning the language; they are not subject to the same kind of general rules that govern the four parts of speech. Undoubtedly his conclusions will be developed and modified by himself and by other linguistic scholars, but for the present [W. Nelson Francis was writing in 1954] his book remains the most complete treatment extant of English grammar from the point of view of linguistic science (93:310ff.).

"The grammar of a language," Dr. Fries wrote, "consists of the devices that signal structural meanings" (99:56). In his 1952 book he indicates the importance of the position of a word in determining its class. An interesting aspect of his book is the fashion in which he uses nonsense words in sentences to illustrate positional clues and to show that even meaningless items can be identified as belonging to Class 1, Class 2, and so on.

In Chapter VII of *The Structure of English,* Fries uses the sentence

The vapy	koob*s*	dasak*ed*	the citar	molent*ly* (99:111).
(adjective)	*(substantive)*	*(verb)*	*(substantive)*	*(adverb)*
Class 3	Class 1	Class 2	Class 1	Class 4

in an example that might have come from Lewis Carroll. Note how the positional clues (supported by italicized morphological clues) enable one to distinguish among the four classes.

Fries accepted Bloomfield's definition of a sentence: ". . . an independent linguistic form, not included by virtue of any grammatical construction in any larger linguistic form" (99:21). (Also cf. 29:170.) On the basis of this definition and his 250,000 recorded words Fries singled out three "utterance units" which are: (a) a single minimum free utterance, (b) a single free utterance, not minimum but expanded, and (c) a sequence of two or more free utterances.

The main value of Fries's work was in the direction it took, the break with "meaning-before-form" description, and some of the descriptions he made clear. His system showed certain inadequacies when one applied it, but he did make the gap between morphology and syntax more visible—even while failing to close it.

Since the implications and applications of the "linguistic approach" for classroom practice are the topics of a forthcoming chapter, further comments on structural grammar will be postponed until the most recent arrival on the present scene, "transformational-generative" grammar, is introduced.

Transformational-generative grammar. In recent years there has been considerable interest in a relatively new theory of grammar which has carried the somewhat unwieldy label "transformational-generative." Understandably, some writers have abridged this to *transformational* or to *generative* grammar. Hereafter the term "transformational grammar" will be used in this monograph because it seems to have been widely adopted by various linguists and writers. Among them are Owen Thomas *(Transformational Grammar and the Teacher of English)* and Emmon Bach *(An Introduction to Transformational Grammars).*

Transformational grammar claimed the attention of the scholars who study language after 1957 when Noam Chomsky produced a slender book with the succinct title, *Syntactic Structures* (54). He advanced the idea that there are basic "kernel" sentences. These sentences are simple, active, and declarative. For example,

> Mary runs.
> The cat sees the canary.
> The boys have bought an auto.
> A kitten may look at a king.

are kernel sentences. (They are similar to the *subject-verb-complement* sentence of traditional grammar.)

Attention already has been directed to the many interpretations or definitions of grammar that exist.[8] It is important to recall Chomsky's definition when examining his concepts. Grammar, he contended, is a device (i.e., a set of rules) that will generate all of the grammatical sequences (i.e., sentences) of a language and none of the ungrammatical ones (54:13). The term generative, then, refers to the point that all other sentences are "generated from" or built upon kernel sentences. This is done by applying certain rules called *transformations.*[9] The transformations may (a) *introduce* new elements (such as adjectives) into a kernel sentence or (b) *rearrange* the kernel, say, to derive passive, negative, or interrogative sentences.

About ten years after his *Syntactic Structures* appeared, Chomsky, while speaking to a group of teachers, made a statement about the generative grammar of a language. He defined it as ". . . the system of rules which established the relation between sound and meaning in this language" (53:593). Many readers may prefer this simple phrasing to his more elaborately worded statement.

In the broadest sense, the true measure of the contributions of the structural descriptivists (symbolized by Fries's work), and of the transformationalists (symbolized by Chomsky's recent publications) will reside in the skill of the teacher in utilizing their viewpoints in the classroom. This is not a small task!

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[8] Cf. Chapter II, pp. 10-20.

[9] For a reasonably simple interpretation of Chomsky's grammatical theories see Owen Thomas, "Generative Grammar: Toward Unification and Simplification." *The English Journal* 51:94-99; February 1962. Also see Thomas's book, *Transformational Grammar and the Teacher of English.* New York: Holt, Rinehart, and Winston, Inc., 1965. 240 pp.

By the time he enters school, a child in some way we do not clearly comprehend has created within himself a grammar which permits him to understand sentences he has never heard before. What is more, he can give voice to his ideas by creating "under his skin" freshly minted sentences which he has never before heard. We may never fully understand this creative miracle of language. But a true measure of our success as teachers will be found in our ability to understand and to guide ever more deftly the learner's language development by becoming more sensitive to the inner world of childhood and youth. Hopefully, the new science of language is exploding in our schools in a way and at a time which will help us move into the future with confidence in our ability to do an even better job.

The Need for Clarification and Synthesis

In view of recent developments sketched in our "Backgrounds" chapter, there is a great need for clarification and synthesis in the classroom applications of the "linguistic approach." Fortunately the literature of linguistics and of the English language arts shows an awareness of this need.

The task ahead. The problems in the task ahead are so well-stated by linguists that a few recent quotations provide as good a statement as can be penned.

> L. M. MYERS: We might begin by outlawing the rather pathetic slogan that "linguistics is a rigorous science," since its obvious inaccuracy alienates many competent observers at once (5:423).
>
> PETER ROSENBAUM: (on the question of the superiority of one linguistic description over another) . . . the most recent account of empirical research in this area indicates the inconclusiveness of all such demonstrations (266:340).
>
> JAMES SLEDD: Compared to the standard grammars, the transformational descriptions are only fragments (279:20).
>
> ANDREW SCHILLER: I said at the outset [of a controlled "structural experiment" at the University of Illinois, Chicago] that structural grammar is no panacea; I say it now [after the study] with authority (273:92).

Despite—or perhaps because of—forthright statements such as those above there is reason for great optimism regarding the task of improving mother tongue instruction significantly during the years ahead. Marckwardt has summarized the work before us:

> 1. To push forward the scientific front through continued research and study . . .
>
> 2. To extend the application of linguistics through the preparation of more and better materials beginning at the elementary school level . . .
>
> 3. To begin to train or retrain teachers to apply the new kind of language analysis (203:272).

Professor Marckwardt concludes his comments with a personal reaction on the role of linguistics in the classroom:

> I . . . prefer to see the movement as a progression rather than a revolution, emphasizing always the virtues of painstaking and rigorous observation of the language, an open-minded but nevertheless critical examination of the analyses which result, and a constant evaluation of the teaching devices which must be designed to make presentation of the language structure functional and operative (203:272).

In conclusion . . . The irreversible alchemy of time has been at work for centuries improving the skill with which man copes with the magic of his tongue. This we learn from history.

During this century, and especially since World War II, the promise of linguistics for better teaching and learning has brightened. The next decade will certainly bring further improvement—if school workers continue to sustain their current efforts to examine and to modify mother tongue instruction with the advice of language scholars—and particularly with heed to their own professional judgment as classroom teachers.

Chapter IV

Linguistics and Classroom Practices

RESEARCH, publications, and discussion are of academic interest *until they begin to make a difference in teaching and learning.* At least since the early 1960's, ideas generated through the scientific study of language have begun extensively to permeate classrooms and to improve practices in English language arts instruction.

Changes in teaching-learning situations are taking many forms. In some instances new content is being introduced. Under other circumstances old content is being deleted or pruned, taught in a different order or in an altered sequence, or introduced at different age levels. Sometimes classroom methods or strategies are changed as new interpretations of subject matter become accepted and as teachers become more sensitive to the nature and needs of the culturally-linguistically deprived child or youth.

The general direction of change. The changes that are occurring in U.S. classrooms are generally consistent with certain linguistic concepts mentioned in Chapter I. These include our recognition for the orderly, flexible, culturally derived and predictable changes that normally occur in language, the fact that "correctness" depends on usage at a given time, the point that language is adaptable and takes its meaning from a particular setting in which it is used, and so on. Also of significance and vitality is the new recognition for the importance of kinesics, the study of gesture, body movements, facial expression, *et cetera,* which often are rich in connotation. This suggests greater recognition in the classrooms of the 1970's for communication skills broadly conceived so as to extend beyond speaking, writing, and reading.

It also seems important to point out that linguistics as applied in the form of new classroom methods has not overturned or repealed the body of knowledge that has been accumulating in educational psychology with respect to the process of learning. The learner continues to learn best when his work has a *purpose* which has meaning that he *accepts*; he continues to learn best through *meaningful practice* rather than abstract drill, he continues to learn best when a *variety* of methods and procedures are used. The learner's immediate experiences and needs should be considered as teachers seek to direct the course of his language development; facts, principles, and concepts should be approached from several sides; a learner should share in evaluating or assessing his own progress. As was noted by Ives (158), "One of the chief contributions of linguistic methods is the *invitation* to the kind of discovery procedures, processes of inference making, and comprehension of underlying theory that are in the educational air."

The following points specifically linked to language arts instruction were suggested by an educational psychologist.[1] They are intended to reflect current knowledge with respect to improving the learner's cognitive development and functioning in language arts teaching.

> Content and structure of language materials should encourage a discovery and problem solving approach. . . .
>
> Instruction should recognize the assumption that the learner is seeking meanings that will enable him to be competent and effective in his milieu rather than merely to seek pleasure from relieving primary drives. . . .
>
> Content in language should be predominantly denotative, referential, and expository so as to permit elaboration and variation as distinct from cliché-bound or stylized language based upon a "particular appeal" or emotive style. . . .
>
> Vocabulary development should be directed with due regard for the extent to which it has functional value or utility in the learner's activities. . . .
>
> There should be system and sequence to instructional materials; i.e., language elements or patterns learned should facilitate success with subsequent elements. . . .
>
> Listening and writing, speaking and reading involve processes of cognition and perception that are linked to phonemic, syntactic, and semantic elements in language. Therefore language activity in the classroom should not be isolated from the meaningful use of language. . . .
>
> The materials of language instruction should be influenced by the principles of phonology and syntax developed by linguistics but should not be presented in isolation—e.g., in the form of phonic drills or rules to be memorized. . . .
>
> Illustrative material such as pictures or diagrams used in the language arts should clarify and instruct. Also, they should not overburden the learner with irrelevant details or be ambiguous. . . .

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[1] The points made are influenced by or drawn from a manuscript by Morris E. Eson (82) which he sent to the writer in 1966. Morris E. Eson. "Language, Thinking, and Teaching." Manuscript in preparation. To be published by Holt, Rinehart and Winston, Inc. Used by permission.

Heed should be given to identifying and overcoming the language deficits of children and youth who come from home environments that fail to support adequate language development. . . .

In view of the preceding paragraphs, the *general* direction of change in English language arts teaching may be said to be: (a) consistent with developments in the scientific study of language, (b) an *extension of* trends rather than a *reversal of* sound, tested elementary and secondary philosophy and theory, and (c) in step with cognitive and developmental theory emerging in educational psychology.

We now turn to each of several components in the language arts in order to summarize developments more specifically related to reading, composition, spelling, literature, grammar, oral English, *et cetera.* Reading is considered first since it concerns so many elementary and secondary teachers and because it has for so long been an area of study characterized by extensive research.

Emerging Changes in Reading Instruction

An entire book easily could be written on the impact of linguistics upon reading. The very extent of what might be said, therefore, suggests the limitations of the few paragraphs that follow.

Linguistic concepts in reading are not new. In view of the recent epidemic of discussions and publications dealing with linguistics and reading instruction, some teachers of the language arts may be astonished to learn that the idea of applying linguistic theory extends back through time for more than 40 years. As far back as 1907 M. V. O'Shea, in *Linguistic Development in Education* (236) devoted a chapter to reading. Bloomfield (32:125-30; 183-86) was discussing linguistics and reading before World War II, and by 1956 Henry L. Smith, Jr. had produced two films designed to be of help to the classroom teacher. Bloomfield's article, by the way, foreshadowed *Let's Read—A Linguistic Approach* which appeared in 1961. Many readers will be familiar with publications since 1960 that were written by Strickland (297), Lefevre (182), and Fries (97) which have been both widely circulated and of great influence.

How linguists look at reading. Linguists speak with many voices so it is naturally impossible to say how *all* linguists look at reading. In general, the student of language as a science does not look at reading as do most elementary and secondary teachers. The teacher sees the reading process as one that involves extracting meaning and "feeling" from a book. Some linguists (the structural linguists, not the transformationalists) tend to identify the process with mastery of the task of associating *graphemes* (significant units in our writing system) with *phonemes* (one of more than 40 significant speech sound units in English). Reading to these linguists, then, begins with developing and absorbing a grasp of grapheme-phoneme relationships (297:10). Professor Albert Valdman (see acknowledgments) is among the linguists who disagree. "This point of view," he wrote, "is obviously inadequate for languages such as English and French where we must form, in addition, grapheme to *grammatical form* relationships. For example, in French *dix* represents the morpheme "10" and subsumes three different phonemic shapes: /di/, /dis/, or /diz/ depending on the syntactic environment." (Letter to author dated May 16, 1967.)

The fact that linguists and teachers of reading do not think of reading in the same context does not necessarily imply a conflict. Linguistics is a source of information; reading theory and methods should be concerned with the strategy and the tactics for employing this information.

In an effort to help children recognize phonemes (i.e., graphic symbols), and associate them with linguistic forms (i.e., words and constructions), a number of materials have been developed under the direction of linguists. These materials often introduce beginning reading by first teaching words in English which have so-called "regular" spellings: *bag, tag, cat, rat, Nan, can, Dad, Tad* and so on. A lesson may consist of nonsense syllables or words chosen because they have "regular" consonant phonemes preceding a particular vowel sound such as the "o" in *cow* or *bow,* and the "a" in *bag* or *tag*. Such writers are concerned with word patterns, hence, despite some superficial similarities the approach is not the same as "teaching phonics" in the manner of first or second grade teachers during the 1930-1960 era.

While the ideas of such persons as Lefevre, Bloomfield, and Fries differ in detail with respect to teaching reading, all of them reflect certain shared views: oral language is important, intonation should receive greater attention, children should *learn* the alphabet (the so-called "alphabet principle"), *isolated* speech sounds should be subordinate to sound *configurations,* and reading vocabularies should initially reflect the consonant-short vowel-consonant pattern. All three of the men mentioned appear to favor developing in children "automatic" or "grooved-in" responses to phoneme-grapheme (sound-printed symbol) relationships.

Explicitly, Fries identifies reading with the process of transfer from the auditory signs for signals that the child has learned to the new (i.e., printed) visual signs for these same signals (97:120). Lefevre (182:4-6) and Bloomfield (31:9-10) seem to concur. It should be pointed out, however, that although some persons with linguistic training have expressed certain pedagogical views, these views are not necessarily implicit in the field. A number of linguists would say that ". . . there is no linguistic method, *per se*, except as any method which includes recognition of linguistic symbols is a "linguistic" method. . . . The relevant question is the accuracy of the linguistic statements that are made and the data on which experiments are based" (158).

New ventures with alphabets. Some mention needs be made of the new alphabets which have made their way into the linguistic soup in recent years since they are (at least loosely) related to the "alphabet principle" mentioned on page 41.

Probably the best known and most widely publicized is the Initial Teaching Alphabet or "i/t/a" associated with Sir James Pitman. This is based on a quasi-phonemic alphabet for one variety of *British* English. The Pitman alphabet is an augmented one which consists of 44 symbols (see Figure 4). Note that there are no capitals to puzzle the beginner since larger boldface letters are used instead.

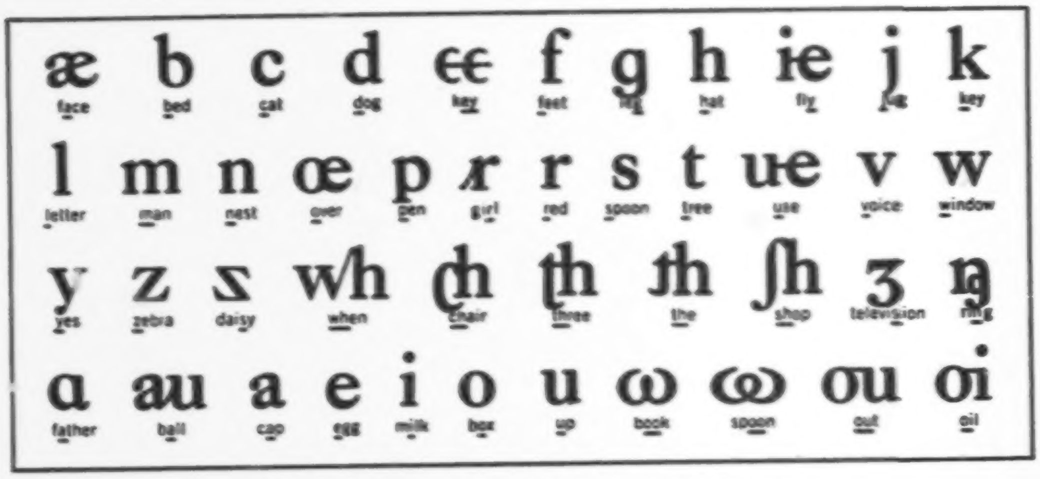
face
bed
cat
dog
key
feet
leg
hat
fly
jug
key
letter
man
nest
over
pen
girl
red
spoon
tree
use
voice
window
yes
zebra
daisy
when
chair
three
the
shop
television
ring
father
ball
cap
egg
milk
box
up
book
spoon
out
oil

Figure 4. The Initial Teaching Alphabet

Copyright © by Initial Teaching Alphabet Publications, Inc., New York.

Differences in American English complicate such ventures as reading related to new alphabets; Eastern New England, Western Pennsylvania, and the upper Great Plains fitting—more or less—the British English of Pitman. To the student of dialects, the problem of using any one type of pronunciation associated with new alphabets is substantial. To illustrate: in most dialects of American English, for instance, "short o" and the vowel of calm are not phonemically distinct, and in many dialects, but not all, "short o" and "circumflex o" are not distinct. (E.g., *collar* and *caller* are pronounced the same.) The pattern of contrasts before / r / (pronounced or not) differs from the pattern of contrasts before, say / d / in all dialects of American English, and there is considerable difference in patterns of contrast before / r / from one regional dialect to another.

After reading the manuscript of this monograph, Ruth Strickland commented that i/t/a as used in the U.S. does *not* always represent British sounds, and that the symbols have been modified to replicate the characteristic sounds of a given region in which the children live. "Bethlehem, Pennsylvania," she noted, "which has the largest i/t/a project in the United States, makes a definite point of this; so does Helen Robinson in the work she is doing in the public schools of Evanston, Illinois." (Letter dated February 17, 1967.)

Initial Teaching Alphabet is based on the premise that children will learn to read better when the sound-print symbols are more consistently related. This accounts for the fact that the number of letters in the i/t/a alphabet are roughly equivalent to the number of phonemes commonly identified in British English by linguists.

Hopefully, the i/t/a alphabet enables children to read more stories sooner at a more complex level. Teachers should bear in mind that Sir James's i/t/a is *not a method* of teaching reading but falls into the category of *materials* of instruction. Actually, the Pitman alphabet is a linguistic device that could be used with all of the long-established procedures: self-selection in reading, "look-say," individualized reading, controlled vocabulary approach, and so on.

Two other new alphabets should receive mention. Both are primarily designed for spelling reform rather than as teaching materials in reading. One of them is UNIFON which also makes use of the phoneme-grapheme (or sound and written symbol) correspondence in English. Unlike i/t/a (which is "transitional" or designed for use only in beginning reading), UNIFON is for permanent use in our U.S. linotype machines, not just for the first or second reader. As the facsimile of the UNIFON alphabet shows (see Figure 5), it contains 40 symbols. It is presumably easier to master than i/t/a and John R. Malone, Executive Director, Foundation for a Compatible and Consistent Alphabet, leads one to infer that a person who already can read can learn and apply his alphabet, in perhaps as little as an hour's time (200).

The second recent alphabetical venture is illustrated in Figure 6. This is Fōnetic English (FO) spelling. A 50-page booklet (263) issued in 1966 presents its objectives, characteristics, and merits.[2] As in the case of i/t/a, these materials serve to facilitate rather than to replace established methods. Interested readers will want to know more about the quasi-alphabetical approach known as the *Words in Color* system. It was developed around 1959 by Caleb Gattengo, formerly of the University of London. Each of 27 consonant and 20 vowel sounds is given a separate color to cue the learner. (See Harriet Goodman, "Words in Color" in Chapter references, p. 91).

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[2] See p. 45 for an illustration of FO in use.

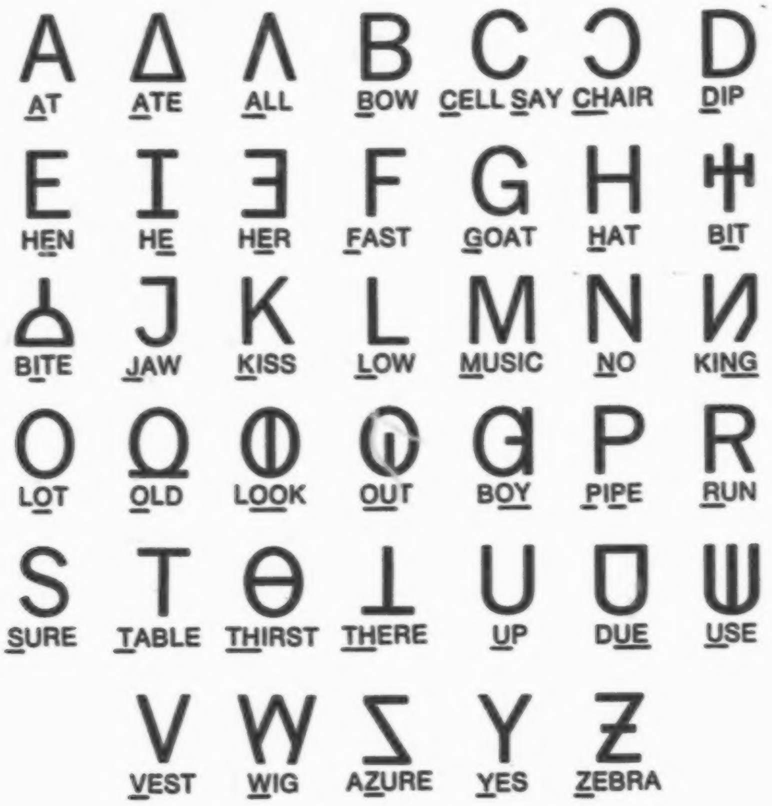
A AT
ATE
ALL
B BOW
C CELL SAY
CHAIR
D DIP
E HEN
HE
HER
F FAST
G GOAT
H HAT
BIT
BITE
J JAW
K KISS
L LOW
M MUSIC
N NO
KING
O LOT
OLD
LOOK
OUT
BOY
P PIPE
R RUN
S SURE
T TABLE
THIRST
THERE
U UP
DUE
USE
V VEST
WIG
AZURE
Y YES
ZEBRA

Figure 5. The UNIFON Alphabet
Used by permission of the Foundation for a Compatible and Consistent Alphabet.

An assessment of trends. The years immediately ahead will provide the real valuation of the changes which linguists propose be made in reading. In other words, they will be "classroom-tested" by teachers, and modified, accepted, rejected, or in one way or another be assimilated in the stockpile of professional knowledge that is constantly a-building. A few preliminary assessments may be made now, however.

First, the newer ideas regarding reading have had a wholesome influence on thinking, discussion, and innovation.

Second, a renewed emphasis on the importance of oral language seems appropriate, especially as it helps children and youth (and their teachers) to give greater attention to juncture, pitch, and stress.

Third, linguists' attention to intonation and non-verbal communication (through gesture, demeanor, and non-speech sounds) have con-

Letter	Its Name	Word Example
ā	ā	āt (ate)
a	a(t)	at
b	bē	best
c	cē (hard c)	cat
d	dē	dog
ē	ē	ēt (eat)
e	e(t)	eg (egg)
f	ef	fat
g	gā (hard g)	get
h	hā	had
ī	ī	īs (ice)
i	i(t)	it
j	jā	jet
k *	kā	Karl
l	el	let
m	em	man
n	en	not
ō	ō	ōld
o	o(t)	hot or father
p	pē	pen
q *	cyū	Quebec
r	or (är)	rat
s	es	sat
t	tē	top
ū **	ū (also yū)	fūd (food)
u	u(t)	up
v	vē	veri (very)
w	wā	wish
x	ecs	fix
y	yā	yes
z	zē	zērō

* Used only in proper nouns.

** Within a word, *ū* is pronounced without the *y* (as in *food*); for starting a word and for the pronoun *you* it is pronounced *yū*.

Figure 6. The 29-letter Fōnetic English Alphabet [a]

siderable promise in reading, and in other language arts skills, for overall improvement of the child's encoding and decoding of meaning.

Fourth, it seems probable that linguists' ideas will increase the wholesome use of such aids as tapes and videotapes, recordings, experience charts and—at least in some schools—with alphabets which may facilitate receptive communication in print.

[a] Fōnetic English Spelling Association. "What Is FE Spelling?" *Fōnetic English Spelling.* Evanston, Illinois: the Association. p. 3.

		Bilabial	Labio-dental	Dental and alveolar	Retroflex	Palato-alveolar	Alveolo-palatal	Palatal	Velar	Uvular	Pharyngal	Glottal
Consonants	Plosive	p b		t d	ʈ ɖ			c ɟ	k g	q ɢ		ʔ
	Nasal	m	ɱ	n	ɳ			ɲ	ŋ	ɴ		
	Lateral Fricative			ɬ ɮ								
	Lateral Nonfricative			l	ɭ			ʎ				
	Rolled			r						ʀ		
	Flapped			ɾ	ɽ					ʀ		
	Fricative	ɸ β	f v	θ ð | s z | ɹ	ʂ ʐ	ʃ ʒ	ɕ ʑ	ç j	x ɣ	χ ʁ	ħ ʕ	h ɦ
	Frictionless Continuants and Semivowels	w | ɥ	ʋ	ɹ				j (ɥ)	(w)	ʁ		
Vowels		Rounded						Front Central	Back			
	Close	(y ʉ u)						i y ɨ ʉ	ɯ u			
	Half-close	(ø o)						e ø	ə ɤ o			
	Half-open	(œ ɔ)						ɛ œ æ	ɐ ʌ ɔ			
	Open	(ɒ)						a	ɑ ɒ			

*Secondary articulations are shown by symbols in parentheses.

OTHER SOUNDS.—Palatalized consonants: ƫ, ȡ, etc. Velarized or pharyngalized consonants: ɫ, ɗ, ɘ, etc. Ejective consonants (plosives with simultaneous glottal stop): p', t', etc. Implosive voiced consonants: ɓ, ɗ, etc. ř fricative trill. σ, ƍ (labialized θ, ð, or s, z). ʅ, ʓ (labialized ʃ, ʒ). ʇ, ʗ, ʖ (clicks, Zulu *c*, *q*, *x*). ɺ (a sound between r and l). ʍ (voiceless w). ɪ, ʏ, ʊ (lowered varieties of i, y, u). ɜ (a variety of ə). ɵ (a vowel between ø and o).

Affricates are normally represented by groups of two consonants (ts, tʃ, dʒ, etc.), but, when necessary, ligatures are used (ʦ, ʧ, ʤ, etc.), or the marks ⁀ or ‿ (t͡s or t͜s, etc.). c, ɟ may occasionally be used in place of tʃ, dʒ. Aspirated plosives: ph, th, etc.

LENGTH, STRESS, PITCH.—ː (full length). ˑ (half length). ˈ (stress, placed at beginning of the stressed syllable). ˌ (secondary stress). ˉ (high level pitch); ˍ (low level); ˊ (high rising); ˏ (low rising); ˋ (high falling); ˎ (low falling); ˆ (rise-fall); ˇ (fall-rise).

MODIFIERS.—˜ nasality. ̥ breath (l̥ = breathed l). ̬ voice (s̬ = z). ʻ slight aspiration following p, t, etc. ̝ specially close vowel (e̝ = a very close e). ̞ specially open vowel (e̞ = a rather open e). ̫ labialization (n̫ = labialized n). ̪ dental articulation (t̪ = dental t). ˙ palatalization (ż = ʑ). ˔ tongue slightly raised. ˕ tongue slightly lowered. ˒ lips more rounded. ˓ lips more spread. Central vowels ï (= ɨ), ü (= ʉ), ë (= ə˔), ö (= ɵ), ɛ̈, ɔ̈. ̩ (e.g. n̩) syllabic consonant. ̯ consonantal vowel. ʃˢ variety of ʃ resembling s, etc.

Figure 7. The International Phonetic Alphabet
Reprinted by permission of the *Encyclopaedia Britannica* 17:898; © 1967.

Fifth, since linguistic poverty is a source of great difficulty for those who are substandard in reading, since there are some differences between standard grammar (in the Chomsky sense) and that of many who have reading problems, and since, in any event, the syntax of oral and written English are not exactly alike, it is likely that some instruction in interpretation of grammatical clues will be helpful.[4]

Of limited or undetermined value, and possibly harmful, are certain other elements in reading instruction with a linguistic orientation. First and foremost is the tendency of some linguists to downgrade the meaning of what is read and the purposes of the reader as essential ingredients in learning. This is not a deliberate downgrading so much as it is a byproduct of the emphasis placed on the grapheme-phoneme relationship which, unless care is exercised by teachers, can lead to de-emphasis of the process of extracting meaning and ideas from print.

Teachers must bear in mind that linguists—at least until the later 1960's—have been most heavily concerned with mastery of units of meaningful print. This is important in the classroom. But equally so are the purposes and personality of the learner and the meaning of the content and ideas in what he reads.

Mastery of grapheme-phoneme correspondence on the one hand and on the other hand the purposes of the reader in extracting the meaning of what is read, fortunately, are not mutually exclusive. It is one of the teacher's important tasks, at all learning levels, to keep "mastery" meaningful and in balance with pupils' purposes.

Linguistics and Literature

There is no "linguistics approach" *as such* to literature for children and adolescents. While linguists have long been interested in literature, and while sagas, epics, ballads, plays, and diaries provide sources of data for historical-comparative linguists, few if any linguists have made appraisals of the instructional-developmental role of literature in U.S. schools or attempted to indicate what the scientific study of language can contribute to it—or vice versa.

Yet there are a number of specific and important points to be made with regard to how (a) the teacher's knowledge of linguistics can make literature mean more during childhood and youth and (b) how literature (without loss of its sparkle, sensitizing qualities, and substance) can contribute to the young student's insight into several dimensions of the nature of language.

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[4] Point 5 was suggested by one of the linguist-consultants who read the MS (158).

The teacher's knowledge of human development and of both literature and linguistics can be pooled to make each more meaningful because of the other. Here are some specific ideas.

Language change

1. Plan work in literature so that it introduces children to the way in which language has changed since Beowulf, since Chaucer, Shakespeare, or the early American Colonists. Almost everything that is read reflects actual language change or an author's effort to suggest language change.

Geographical and social dialects

2. Through your selections, help children to learn the concepts involved in pidgin, creole, or cajun and various forms of "dialect," plus the fact that speech (such as Eliza Doolittle's cockney chatter in *Pygmalion*) is *non*-standard rather than *sub*-standard. As appropriate at the age of pupils, show how dialects tend to be regional and may actually preserve old or "classic" ways of speech.

Comparative linguistics

3. Draw attention to cognate words and venture a bit into comparative linguistics as foreign phrases in literature present themselves.

Linguistic geography

4. Use opportunities that inevitably arise to show that there are "language families" (see Appendix C) as literature takes you to lands where Arabic, Japanese, Swahili and Urdu are spoken.

Usage

5. Find opportunities to point out how language usage varies not only from time to time and from place to place, but also from situation to situation. Help children and young adolescents to note that there are gradients from the most informal to the highly formal in the speech of the same characters in stories and plays. (See p. 58 infra.)

Semantics

6. In many pieces of literature the plot is thickened or quickened by misunderstandings that involve the meaning of words or the meaning of meaning. Examples range from the Brothers Grimm and their fairy tales to Shakespeare.

Metalinguistics; general semantics

7. Sensitize pupils to the influence of words for good or for ill on people and on behavior; how "words can bruise and break hearts, and minds as well. There are no black and blue marks . . . and therefore no prison bars for the offender" (72:15).

Kinesics; phonemic analysis; shades of meaning

8. In the oral reading of literature, illustrate how gesture, intonation, and expression have a direct bearing on meaning and its nuances. Make clear how meaning can either be sharpened or blunted by tone and gesture. Parody, irony, and structural ambiguity are among elements which carry shades of meaning and which literature illustrates abundantly.

As the notations in the left-hand margin above suggest, many if not most of the branches and subdivisions of linguistics can be made more meaningful through the study of children's and adolescents' literature. Actually able teachers who love literature and the magic and mystery of their tongue, long have been making language and linguistics more understandable. Continuing to do this, more methodically perhaps, brings us as close to a "linguistics approach" to literature as any that we are likely to find in our schools for a long time to come.

A good starting point is that of examining the eight items enumerated above and making your own marginal notes as to the tales and classics you can think of—at the age level you teach—that will create the greater depth of linguistic understanding needed to enrich further the contribution of good literature.

Potential Improvements in Spelling

Although the recently devised alphabets such as i/t/a, Fōnetic English, and UNIFON (see pages 42-45) are no quick panacea for spelling problems in the U.S., they serve very well to illustrate a point we sometimes overlook: there are more sounds in our language than a 26-letter alphabet can cope with easily. Even stubborn, determined men like George Bernard Shaw (who left money in his will to further spelling reform) and men controlling communications media like the late Colonel Robert McCormick, owner of the *Chicago Tribune* (in whose pages *freight* was spelled *frate*), have never scored significant victories over the orthography of Webster's famous old "Blue-back Speller." [5]

The contradictions and inconsistencies of American spelling are illustrated in the amusing poem, attributed to an anonymous British wit, which is reproduced on page 50. But while having identified the problem is one thing, removing it is quite another. Let us see, in brief, what some linguists are proposing.

Linguists' suggestions. Students of language proffer several ideas with regard to improving spelling. Word lists and the "functional" or "frequency-of-use" approaches they dismiss as less promising than teaching regular words first to young children, including as needed only irregular words of the highest frequency, and making our approach to spelling more systematic.

If a major contribution of linguistic theory to spelling practice were

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[5] Actually, Webster's "Blue-back Speller" was entitled *The Elementary Spelling Book* and was published in 1829 as a revision of his 1817 *American Spelling Book*. Perhaps 100,000,000 copies of Webster were sold with incalculable influence on 19th and 20th century spelling instruction.

English

I take it you already know
Of tough and bough and cough and dough?
Others may stumble, but not you
On hiccough, thorough, slough and through?
Well done! And now you wish, perhaps
To learn of less familiar traps?

Beware of heard, a dreadful word
That looks like beard and sounds like bird.
And dead; it's said like bed, not bead;
For goodness sake, don't call it deed!
Watch out for meat and great and threat,
(They rhyme with suite and straight and debt).
A moth is not a moth in mother.
Nor both in bother, broth in brother.

And here is not a match for there,
And dear and fear for bear and pear,
And then there's dose and rose and lose—
Just look them up—and goose and choose,
And cork and work and card and ward,
And font and front and word and sword.
And do and go, then thwart and cart.
Come, come, I've hardly made a start.

A dreadful language? Why, man alive,
I'd learned to talk it when I was five,
And yet to write it, the more I tried,
I hadn't learned it at fifty-five.

—Author unknown.

to be singled out it doubtless would be the suggestion that "linguistic patterns" supersede the long standing spelling-lists which go back to early research by Ayres and Thorndike undertaken over 50 years ago. If the "patterns" approach were followed, presumably more schools would first introduce words with a *consonant-vowel-consonant* sequence—little, regular words such as *cat, Nan, Dad, bag,* or *lap*. Later this might be extended to include words with the consonant-vowel-consonant plus terminal "e" (*bite, cone, gate*).

In due course other patterns would follow: words with the rolling "r" sound, the sibilant "s"; consonant-vowel types such as *he* or *to*; or the *consonant-double vowel-consonant* variety such as *pain* or *toad*. Attention also is given to high-frequency words which we do not analyze but accept *ideographically: of, and, the,* and so on.

Of a potentially helpful nature, too, is the linguists' contribution to the technical diagnosis of some of the *reasons* which may underlie certain misspellings: e.g., *wich* where *which* rhymes with *witch; or* for *are,* or the reverse, where *farmer* and *former* are pronounced alike, *of* for *have* after a modal, and so on.

Although interest in spelling in a linguistic context is increasing, we stand at present somewhere short of the kind of breakthrough which a number of linguists anticipate. If and when it comes, the "Big Change" in U.S. orthography may be based on the theory and work of researchers who are analyzing the sound system which serves as a foundation for our spelling/writing system (124). As frequently implied in earlier chapters, these linguists insist on the "primacy of speech" concept and look upon writing—i.e., representing language by means of letters—as only a simulacrum of "true" or spoken language. Building on the spoken tongue, students of phonology (the study of speech sounds and their changes) have refined the idea of the phoneme, analyzed oral speech, and identified certain characteristics of English. In due course we may achieve new, advanced spelling systems as a result of these searching linguistic analyses. This could be a great day—but the immediate prospects for it are dim.

McQuown, an anthropological linguist, contends that "If English were spelled as it is pronounced, it should be possible to make children completely literate in about their first half-year of schooling" (215:405). He bases this view on work done with Tarascan Indians in Mexico where learners became literate in an average of less than 100 hours of instruction that was built around a phonetic alphabet recently produced expressly for their language (216:2-6). While Professor McQuown may not have allowed for the greater experience of older Indians in inferring that six-year-old children also could become "completely literate" in grade one, it does seem self-evident that any reduction in the vagaries of English spelling would accelerate learning.

Words once *were* spelled more or less as they were pronounced in English. Since spellings of words today in some cases reflect, say, 15th century pronunciations, it would (paradoxically) be an *advance* with respect to many words if linguists were to help us "retrogress" to the centuries-old practice of spelling the way we sound.[6] This is impossible, however, since the English language is the sum of its many dialects, and there is no way to reach agreement as to *whose* pronunciation should govern spelling in English. Besides, language change will continue to make any such spelling reform obsolete even before it could be universally adopted.

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[6] Three readable treatments of aspects of language and spelling changes are to be found in Marckwardt (202), Hook and Mathews (149), and Baugh (18).

Composition and Handwriting

Comment is now directed toward classroom practices in relation to composition and handwriting. This is done not so much because of the recommendations of linguists as because of unanswered problem-questions which are raised in composition and handwriting as an outcome of linguistic approaches to spelling and reading.

Problems and opportunities in composition. At the elementary school level the teacher encounters at least two minor difficulties which he must bypass in order to stimulate the expressive communication skill in preserving ideas skillfully on paper. With quite young children the question comes up: "If only regular words and highest frequency irregular words are studied in spelling, what shall our policy be in regard to novel and irregular words which children may ask the teacher to spell so that they can express certain ideas in their written work?"

Linguists who read the present manuscript[7] were unanimous in labeling this query a straw-man. Any child seeking to use a word, e.g., *colonel*, which was irregular in *English* (after all, the French say *kaw-law-nel*!) should be told how and encouraged to spell it in his paper. In other words, *meaningful* encounters with irregular spellings are not likely to confuse children in their writing, although highly irregular words should not be introduced arbitrarily or with needless prematurity in spelling.

A second "difficulty" also was deemed a straw-man. This was the false assumption that linguistics, with its emphasis on phoneme-grapheme correspondence, elevated the mechanics of composition above creative expression. Here linguists cheerfully concur that the release of creative power in writing is the *goal* and that mechanics are subordinate *means* to effective self-expression. To put it pungently: never tell an eight year old not to use *colonel* because he is asking you to spell a sixth grade word in the third grade room!

Several opportunities of a linguistically significant nature suggest themselves for work in creative writing or composition at any age level:

1. Encourage children and young adolescents to recognize the relationship between speech and writing (and the prime importance of speech) in composition by reading aloud what they have written. Help them to inject the melodic flow of oral language into what they write as well as to extract it from what they read (83:6). Do not assume, however, that all good spoken discourse is also automatically good written discourse when put in written form.

2. Infuse into composition, by linking oral and written language, a growing awareness of the ties that bind pitch, stress, and juncture to our punctuation system.

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[7] Cf. "Acknowledgments."

3. As children grow older and their vocabularies ripen, introduce them to economy in learning by illustrating the spectrum of words that can be extrapolated from a single word (83). For instance:

dizzy, dizzier, dizziest	(adjective)
dizzied, dizzying	(verb)
dizzily	(adverb)
dizziness	(noun)
recognizable	(adjective)
recognize(d), recognizing	(verb)
recognizably	(adverb)
recognition	(noun).

Words used in a composition often lend themselves to making points like these because they have a functional utility and meaningful quality at the time a student is writing a composition. They may lack this quality in a grammar lesson.

4. Assist children and youth as they write to sense the distinctions between formal and informal usage of language and to develop a sense of fitness as to how specific situations mediate written as well as oral usage.

A footnote on handwriting. A few comments on handwriting are included not because of their great importance in a linguistic context but to assure the reader that the topic was not overlooked.

The ideas of linguists for improving language arts instruction leave unanswered one of the most durable of questions: At what time should systematic teaching of handwriting be undertaken?

A complicating factor also may be injected in the near future if some of the new alphabets find greater acceptance. What letters shall children learn to form? Those in our present alphabet? New letter forms? Or both?

At the moment it seems safe to make the following generalizations:

1. The field of linguistics at present has nothing of major significance to add to past and current educational research bearing on manuscript versus cursive writing, on the timing of beginning handwriting, or on the question of changeover from manuscript to cursive script.

2. Stress on the "alphabet principle" in reading (see page 41) suggests by inference that there may in the future be an earlier onset of children's awareness of and/or interest in learning letter forms. This, in turn, could lead to a somewhat earlier introduction of manuscript writing skills for some children.

3. The wide range of human development with respect to both readiness and neuromotor maturity continues to support the continued need for varying, *on an individual basis,* the time at which a given child receives methodical, continuing instruction in handwriting. This statement also applies to switching children from manuscript to cursive writing.

Grammar and Usage

Of all the fields or subdivisions in the English language arts, grammar and usage are quivering most conspicuously from the shock waves created by the impact of linguistics on classroom practice. Evidence of the new developments can be found in numerous articles and some books that have been published, especially since 1960. Representative of writings of the 'sixties which are readable, brief, and generally available to teachers are such contributions as Squire's "Tension on the Rope—English 1961" (290), Searles's "New Wine in Old Bottles," *The English Journal,* 1961 (275), Schiller's 1964 *Harper's* article, "The Coming Revolution in Teaching English" (273), and "The Current Scene in Linguistics: Present Directions" by Chomsky which appeared in May 1966, in *College English* (53).

What is happening in U.S. grammar: an analogy. We noted in Chapter III that grammar had gone through several developmental changes in recent centuries. These Harold B. Allen (see p. 24) identified as "Grammar A" (Latinate or traditional and *prescriptive*), "Grammar B" (historical and *descriptive*), and "Grammar C" which is the present-day variety and includes *structural and transformational grammar.* A simple analogy may help to explain what has been taking place since, roughly, about 1950 in "Grammar C."

The 18th century grammarians, of whom Robert Lowth is symbolic, developed a prescriptive blueprint for grammar. Based upon this blueprint, U.S. teachers of English created a "temple" to Latin grammar which dominated the content of instruction until the recent past. Metaphorically, within its walls ". . . the English teacher . . . forced her charges toward a parroted perversion of Eighteenth Century normative grammar . . ." (211).

Beginning around 1930, and especially since 1950, various linguists have attacked the temple of traditional grammar. Its walls were weakly buttressed with inconsistency and doubtful logic. They crumbled under the battering of structural linguistics. In the late 1950's transformational grammarians (despite their recognition of some virtues in traditional grammar) had brought their theories into the fray and by the 1960's the temple was demolished; its towers topless, its "Lowthian columns" toppled. A dwindling band of defenders remained entrenched within the temple's inner citadel but there seemed to be no escape route open—unless they chose to be adopted into the transformationalist or structuralist tribe, learn new rites, and master a different (albeit cognate) language.

The English teacher's transitional move from the venerable precincts of the temple of Latin grammar to a new edifice of practice might have been more easily accomplished during the 1960's except for the fact that the linguistic scholars, while demolishing the centuries-old building, had not gotten around to constructing a new one. Further to confuse the situation, there were some jurisdictional strikes involving the linguists' "unions" over the question of whose blueprints would be used to create the new edifice and who would be honored within its precincts once it opened its doors to public education.

Extending the analogy further might bring us to the border, if not across the border, of tedium. Suffice to say that new foundations of practice in teaching grammar are being laid and laid both carefully and soundly. At the same time the details of the structure arising on these new linguistic foundations adjacent to the old Latin temple are not yet entirely clear. Of one thing we can be reasonably sure, however. Some of the masonry from the old building will be reused in the new one—and linguists agree that the new edifice will thereby become handsomer and stronger.

Contributions from linguistics. Aside from the basic ideas and theories reviewed in previous chapters,[8] linguistic science has made a number of rather specific contributions to the field of grammar and with respect to usage, too. One of the major ones, already noted in connection with reading (p. 41), is the way in which linguists have focused attention and stimulated discussion regarding changes in practice that are leading to curriculum reformulations of genuine consequence. Another major contribution, although a negative (what *not* to do) rather than a positive (what *to* do) one, is the discrediting of the assumption that Latin was a logical basis for English grammar; i.e., successfully showing what elements of conventional grammar are most dubious.

Another advance already made through the scientific study of language is the recommendation that related concepts be taught with greater attention to their relationships and interrelationships. The grammatical category of the *determiner* (our erstwhile articles, personal possessive pronouns, demonstratives, indefinite pronouns, and numerals) is also valuable. So is the idea of the "test frame" proposed by C. C. Fries as a device for noun identification.[9]

New systems of diagramming, however formidable or alarming they may seem to the teacher at first glance, likewise are important innovations. (See the diagrams illustrated on page 56.) Furthermore, these systems of diagramming are not inherently more difficult to comprehend than the numerous traditional diagrams. The nonsense sentence (see p. 34) also is useful in illustrating grammatical concepts, especially the importance of word position in a sentence. Probably the use of oral language, already frequently mentioned, should have its importance reiterated in regard to grammar where oral exercise is helping learners to catch the nuances of meaning embedded in tone, intonation, and so on.

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[8] Cf. pp. 32-36.

[9] The test frame (e.g., "The —— was good.") is a frame that will accommodate either abstract or concrete nouns. See C. C. Fries, *The Structure of English*, pp. 74 ff.

Passive sentences are generally agnate to active sentences. In a transformational grammar this provides a way to generate them. The T-rule may be formulated as follows:

$$\text{T1}\quad \underset{1}{NP} + \underset{2}{X} + \underset{3}{V\text{-}t} + \underset{4}{NP} + \underset{5}{\text{-}m} \Rightarrow \underset{4}{NP} + \underset{2}{X} + \underset{\mathrm{f}}{be}$$
$$+ \underset{\mathrm{f}}{\text{-}en} + \underset{3}{V\text{-}t} + \underset{\mathrm{f}}{by} + \underset{1}{NP} + \underset{5}{\text{-}m}$$

The following abbreviated derivation will illustrate how this rule operates:

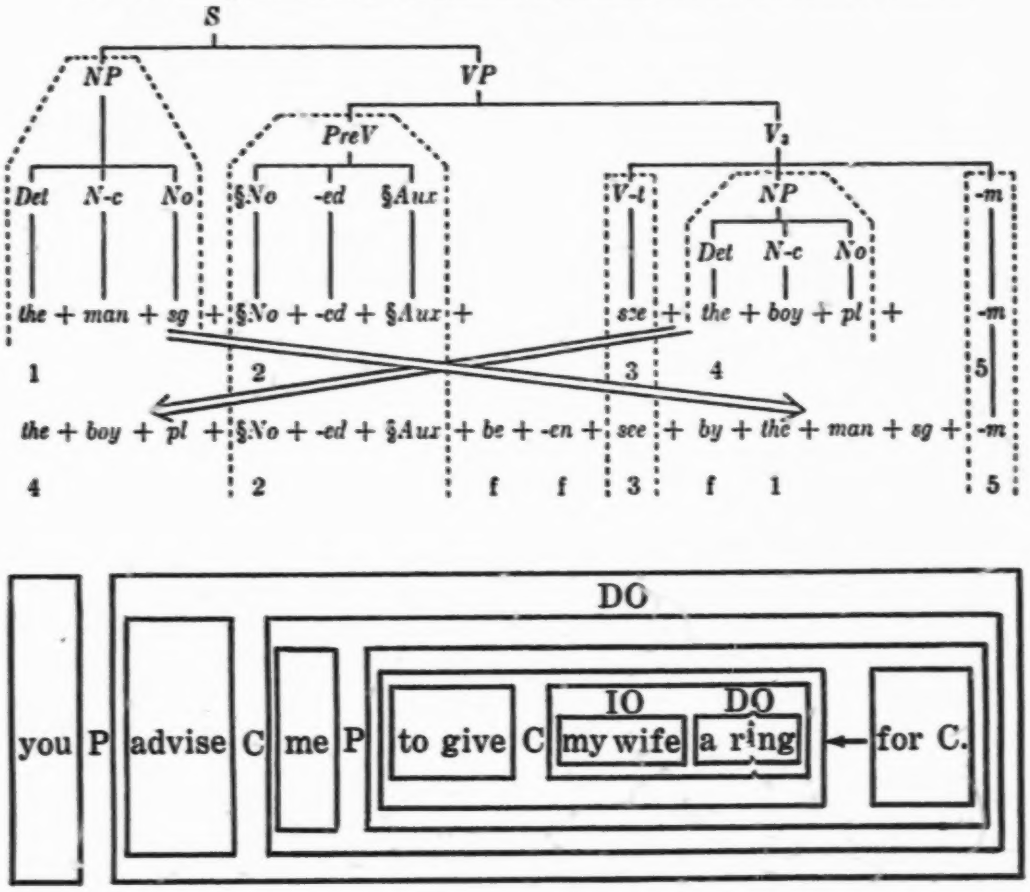
S
NP
VP
PreV
V₂
Det
N-c
No
§No
-ed
§Aux
V-t
NP
Det
N-c
No
-m
the + man + sg + §No + -ed + §Aux + see + the + boy + pl + -m
1
2
3
4
5
the + boy + pl + §No + -ed + §Aux + be + -en + see + by + the + man + sg + -m
4
2
f
f
3
f
1
5
DO
IO
DO
you
P
advise
C
me
P
to give
C
my wife
a ring
for C.

Figure 8. Two Illustrations of Diagrams Developed by Linguists[10]

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[10] The upper illustration is taken from Gleason (104:257). From *Linguistics and English Grammar* by H. A. Gleason, Jr. Copyright © 1963, 1965 bv H. A. Gleason, Jr. Reprinted by permission of Holt, Rinehart and Winston, Inc. The lower one from Francis (94:389). Copyright © 1958 by The Ronald Press Company.

The transformationalists' concept of kernel sentences—or sentence nuclei—and of transformations (sets of rules) for enriching and rearranging the kernel is a further vital new idea to which allusion has already been made.[11] Yet another contribution is Noam Chomsky's interpretation of grammars as having three components: (a) The ways morphemes amalgamate in phrase groups (*phrase structures*); (b) the rules governing the creation of sentences or phrase groups (*transformational structures*); and (c) the phonemic changes in morphemes (*morphophonemics*) already defined in Chapter II, page 14.

Edward Sapir, one of our most respected linguists, made the widely quoted remark, "All grammars leak." While this remains true, there is considerable likelihood today that the leaks are less ruinous than before Sapir's death in 1939. The theory and research of structuralists and transformationalists have at worst provided better patches for the old ship, grammar. At best, we may find that a new Ark is on the ways with a hull that is more impervious to the vagaries of human language.

It is not within the scope of *Linguistics and the Classroom Teacher* to pursue the topic of grammar in greater detail here. Chapter V, however, provides leads to readings which give more information on grammar, along with other topics related to linguistics, and should help teachers seeking to further their personal in-service education efforts.

New ideas regarding usage. Usage, we learn from linguists, is a topic separate from grammar. Allen makes the distinction quite plain. "Grammar is the description of what goes on inside a language," he writes. "Usage," he continues, "is the relationship between what goes on inside a language and the context of speaker, audience, time, place, and occasion in which it occurs" (5:272).

Linguists also have made it clear that absolute or inflexible and unchanging standards of "correctness" in language cannot be defended. Indeed, for practical purposes, efforts to resist changes in usage are a waste of time since language change is inherently inevitable. Let us put it this way. Not only is "correct" usage a variable; "correctness" in a given time, place, and situation in history is emergent. This was adroitly stated centuries ago by the Roman Emperor Justinian who said that *when everyone makes the same error it is no longer a mistake.*[12] Yesterday's barbarism in speech often becomes commonplace and accepted today and by tomorrow it may even have become so quaint and archaic as to appear only in the formal speech of the older generation.

Emergent change in usage, however, does not imply a lack of respect for suitable use of the mother tongue. As Pooley wrote earlier in the 1960's, "We are committed by duty and conscience to bring every student as close as possible to the attainment of a decent standard of English usage by every means at our command" (248:176). The difficulty resides not in whether to have standards of usage but, Pooley subsequently says, how to identify and describe these canons (248:176). Malmstrom has pointed out that there can be "a great variety of disagreement on usages" (199:193) between textbook pronouncements and data in a linguistic atlas[13] under some conditions. In the 1950's, at least, such a usage as "it's me" was commented on by 205 textbooks. About 88 percent of the books frowned on "it's me," and only 3 percent (6 out of 205) accepted the reality of the findings in the *Linguistic Atlas of the United States and Canada* which showed that "an overwhelming majority of all informants in all areas say it's me" (199:193). As matters stand, ". . . there are signs that the new grammar is gaining ground [but] no such comments can be made about the battle over various doctrines of usage" (13:209).

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[11] Cf. pp. 34 ff.

[12] *"Comunis error facit ius."*

Although it does not directly answer the question of what is "proper" usage, classroom teachers will find it helpful to bear in mind that there are three or more culturally derived "levels" of usage. Porter G. Perrin some years ago, in his useful *An Index to English,* suggested the categories of *formal, informal* and *vulgate* English (244:364 f.). Another writer has named five types: (a) the illiterate, (b) the homely, (c) standard English (informal), (d) standard English (formal), and (e) literary English (250).

Common sense suggests that the many distinctions which the teacher must draw with respect to usage will continue to depend upon his professional judgment. Bear in mind the way in which new usages are fighting their way to respectability, how the use of such terms as *who* in place of *whom* and *it's me* seem to be becoming standard English, and that, linguistically speaking, several different usages may be "correct" under certain circumstances and conditions.

> By giving more than lip service to the concept of individual differences, we will expect and accept individual differences in language with the clear realization that each child speaks the dialect which he has heard spoken, and that he has heard much more speech outside the classroom than in it. Our function is not to make him ashamed of the dialect he has learned from his parents and his friends, but to add to it the standard dialect in order to increase his social and intellectual mobility. We do this job first, by teaching him to read and write the symbols by which language is recorded in books, and the spelling system by which they are arranged; and second, by encouraging him to use his new powers of reading and writing, along with his powers of speaking and listening,

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[13] A linguistic atlas contains maps that show the geographical boundaries of certain languages and dialects.

which he learned long before he entered our classrooms, to gather, consider, and express ideas that are important and new to him (199:198).

Some Generalizations Regarding Classroom Practice

In view of the several schools of thought regarding what is the "best" linguistics approach, it seems clear that the elementary and secondary teacher must make choices from the array of ideas, theories, and proposals that are competing to influence the nature and direction of what he does when teaching the mother tongue. This process of making wise choices is the *eclectic* approach. Webster defines it as "selecting what appears to be the best in various doctrines, methods, or styles." In English language arts instruction this involves choosing what promise to be the most sound and intellectually appealing elements from among the various developments in linguistics with a bearing on the work of the age group in your classroom.

How does one make good choices? The following generalizations offer some clues:

1. Weigh all practices that you contemplate introducing to make sure that they do not violate basic principles of human development including what is known about learning.

2. Avoid following the prescriptions of "neo-pattern teaching" in the language arts. They reduce teacher initiative and creativeness.

3. Be wary of prescriptions which ignore or minimize the importance of interest, purpose, and motivation.

4. Do not, in a spasm of confusion, suddenly discard English education practices you may have used for years merely because you fear that such long-standing procedures (and teachers who use them) are now obsolete. Be sure that you have a valid reason, one you understand and accept, for making a given change.

5. While recognizing the primacy of speech, one should not construe this to mean that reading and writing are less important than before the "Quiet Reformation" in language arts teaching. Spoken language offers clues for teaching other skills; it does not minimize their worth.

6. Study ways in which conventional terminology in English education, as appropriate or as redefined, can be modified to fit or to help interpret new facts coming to light through linguistics.

7. Recognize that grade placement of any particular English language arts skill or experience is mediated by the backgrounds of children as well as by their developmental stages. A group of Spanish-American six year olds in Laredo or El Paso who hear only Spanish in their homes obviously present different opportunities to the teacher and bring to school different needs from

those of children reared in suburban Chicago or in rural New England. The same statement applies to secondary school pupils.

8. Build on the ways in which certain dialects that may be encountered in the schoolroom can be used to help children understand both language and language change; the minting, circulation, and wear-and-tear that words undergo.

9. Recognize that intonation, or pauses, and punctuation are different sides of the same coin and should be handled in relationship wherever feasible.

10. Look for opportunities in social science, history, science, and foreign language to teach language concepts. For instance, comparative, historical, and geographic linguistics can be taught in subjects other than English.

11. Leave children and youth with an insight into certain assumptions or facts related to language that can be explored at suitable levels of human and cultural development. Herbert Hackett's list of assumptions is a good one: (a) Language is behavior . . . (b) Language is a functioning tool in interaction; it is less often a means of reflective thought . . . (c) Language operates within a cultural context and is limited by it . . . (d) Language is not only dependent on its culture, but in turn structures reality for this culture. The individual cannot operate outside the limits set by his language, nor see the world except as it is given structure by his language . . . (e) As behavior, language is measured by effectiveness in terms of purpose . . . (f) As behavior it must be studied in terms of group norms; the expectation of the group as to usage, content and purpose . . . (g) Language cannot be taught prescriptively, [unless the prescriptions are currently relevant] . . . (h) The unit of language is . . . the total perception to be transmitted, to which the parts are bound . . . (i) The end of language is . . . better perception by the audience . . . (j) Language as social behavior has social responsibility, including proper recognition of bias, accurate use of data, and a positive acceptance of the opinions of others and of the relativity of knowledge.[14]

12. *Methodically* take the eclectic approach to changes in practice as implied by Chomsky, the brilliant and innovative linguistic theorist. This point requires some elaboration and explanation. This is done in the paragraphs that follow.

Chomsky, as recently as 1966, vigorously urged a synthesis of linguistic theories; a suggestion involving eclecticism or selection of the best in various methods (53:587 ff.). *Speaking of traditional 17th and 18th century grammar,* Chomsky says, "I think we have much to learn from a careful study of what was achieved by the universal grammarians of the seventeenth and eighteenth centuries. It seems to me, in fact, that contemporary linguistics would do well to take their concept of language as a point of departure for current work" (53:589).

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[14] Abridged slightly from Herbert Hackett (122:452-53). Professor Hackett acknowledged his debt for some of his ideas and phrasing to Frederick Reeve (254:445ff.).

Speaking of structural linguistics, Chomsky comments that it ". . . has very real accomplishments to its credit. To me, it seems that its major achievement is to have provided a factual and methodological basis that makes it possible to return to the problems that occupied the traditional universal grammarians with some hope of extending and deepening their theory of language structure and language use" (53:590). Chomsky, of course, also sees great merit in his own generative grammar, ". . . a system of rules that determines the deep and surface structures of the language in question, the relation between them, the semantic interpretation of the deep structures and the phonetic interpretation of the surface structures" (53: 593).

The significant point here (one which explains the presence of the above quotations), is that there are values such as Chomsky mentions in the theories and methods of more than one school of thought. When a teacher faces the question of which systems of rules—which grammar—shall I teach, an *eclectic* decision must be made. "The answer is straightforward in principle, however difficult the problem may be in practice," says Chomsky. "The answer is simply: teach the one that is correct" (53:593).

In fine, professional judgment and experience continue to be the foundation for recognizing promising, or "correct" ideas among the changes proposed in English education; and the "method of applied intelligence" retains its value in choosing the theory, content, and procedures that blend into superior classroom teaching.

So much for our generalizations, many more of which might have been presented and many more of which inevitably will come to the teacher's mind in his continuing quest for ways to improve the world of the classroom, and through it the learner's personal language habits which lie within him in the private world in which he has his being.

Where do we go from here? If the "best" classroom practice comes from within the teacher as he makes his eclectic decisions, then we go from here to the information and data in which wise choices reside. What better starting place than recent research and useful publications in education that have a bearing on linguistics?

Chapter V

A Review of Research and Publications Dealing with Linguistics in the Classroom[1]

IT IS the primary purpose of Chapter V to review recent research deemed to be of interest to English language arts teachers. The second purpose of the chapter is to present a selected and annotated list of a few books that promise to be of interest to persons seeking more information than our ASCD monograph can offer.

One of the apparent strengths of linguistics is that, by definition, it is the scientific study of language. Since "scientific study" implies research and methodical inquiry, we shall encounter in the next several sections summaries of writing that are directly or indirectly based on data which suggest how teachers can improve their work with young learners. In the same breath, the reader is cautioned against accepting the findings and opinions cited as firm or final. The field of applied research in linguistics is moving through a dynamic and changing era, hence it is well (while in no way deprecating the publications summarized) to bear in mind the comments of Berelson and Steiner (20) who urge discrimination and reserved judgment when reading and interpreting research. They note that:

> . . . there are some important things wrong with the behavioral sciences at this stage in their development: e.g., too much precision misplaced on trivial matters, too little respect for crucial facts as against grand theories, too much respect for insights that are commonplace, too much indication and too little proof, too little genuine cumulation of generalizations, too little regard for the learning of the past, far too much jargon (20:12).

Weigh carefully, therefore, the research given below, and bear in mind that it is *reported* rather than *evaluated* in any depth. Do not equate major ventures, carefully documented, with the admittedly tentative or exploratory, and, when feasible, read the original statements to verify scholarship, respect for facts, the nature of proof, the wisdom of the past, and the merited generalization.

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[1] For advice and assistance in identifying research and writing cited in Chapter V, particular thanks are due Robert F. Hogan, Eldonna Evertts, and James Squire, all of the National Council of Teachers of English. For painstaking bibliographic work, recognition also is due Mary E. Reddin, Assistant Professor of Education, University of Hawaii, and to C. Keith Martin and Howard Hayward, Indiana University graduate assistants.

Organization of Chapter V. The distribution of research with a bearing on linguistics largely determined the organization of the first half of the present chapter. Most of the educational research[2] published since the early 1960's (and in journals available to the reviewer) were either (a) general in nature, (b) concerned with linguistics and reading, or (c) related to spelling, grammar, and usage or a combination thereof. Sections that follow are built around these three headings.

Most of the research cited was taken from publications intended for elementary and secondary teachers and college teachers in schools of education rather than extracted from periodicals designed for professional linguists. Space available in the monograph required that a limited number of publications be cited. Whenever possible the articles selected were chosen from among those done after 1963 since early benchmark studies often were mentioned in Chapters III or IV.

General Background Material

Beginning in 1963 and especially after 1964, there was a flow of articles and reports written to familiarize the teacher with what was sometimes inaccurately called a "linguistics approach" to mother tongue instruction.

History in capsule form. Among articles summarizing historical backgrounds of linguistics was one by Weiss (319) with the eye-catching title, "Instant Linguistics." Writing for secondary teachers, he sketched in backgrounds, introduced personages in linguistics (e.g., Sapir and Bloomfield) and proposed several ways to improve English education programs.

A minor classic for teachers was written by Raven I. McDavid, Jr. (211) in *The Harvard Educational Review.* With great skill and at some length he traced developments in linguistic science since 1919 and (while using H. L. Mencken's *The American Language* as a focus for his article) made an excellent presentation of some of the people, the problems and the promise currently associated with linguistics.

Contemporary comments and trends. Evertts (83) clearly presented the influence of linguistics in the schools in an interpretative article, and

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[2] The term "research" as employed here includes a number of writings which are based on or which discuss research as well as actual reports of experiments.

Whitted (323) discussed how what she called a "linguistic attitude" could be developed by the elementary school teacher. Dawkins (63) editorialized pleasantly about the developing role of linguistics, and Moulton (228), a Princeton University linguist, identified the central problem of linguistics as that of understanding more fully how two people are able to talk to each other. Moulton also presented eleven steps in the process of communication, namely, semantic encoding, grammatical encoding, phonological encoding, the brain-speech organs step, speech organ movements, vibration of air molecules, vibrations of the ear, the ear-to-brain step, and phonological, grammatical, and semantic decoding (228:49-53).

Succinct and useful contemporary comment was provided by Strickland (296) during 1966 in a widely cited article which summarized the contributions of linguistics to reading, spelling, and grammar. Trends in English instruction as of 1964 were reviewed by Painter (238) with particular emphasis on linguistics. She correctly forecast a more dynamic tempo in the language arts program in the immediate future.

Lefevre (179), Griffith (120), and Laird (172) serve as three further illustrations of writers who have worked diligently to inform classroom teachers of current developments. Lefevre's article briefly defined linguistics and pointed to its contribution to reading. Griffith, an English professor, argued vigorously that a knowledge of developments in the scientific study of language had become a practical necessity for teachers. Laird examined six assumptions regarding structural linguistics, urged that they be tested, and joined Griffith in contending that all persons planning to teach English be required to enroll in a course in linguistics.

A 1963 interchange of opinions between English professors in two of Chicago's teachers colleges serves to round out our sampling of recent comment on trends in linguistics as related to language arts teaching. Verbillion (315) advised caution in applying linguistics and urged that hypotheses not be mistaken for laws. Specifically, she warned against "watermelon-vine" linguists who spread out to cover all of the language arts program with greater breadth than depth, and used the term "carrot-linguist" to describe more kindly those "pure" linguists who worked quietly on reasoned research until their roots were mature. Virginia McDavid (212) in a reaction to Verbillion's article endeavored to *disprove* such concepts as the notion that linguistics is an experimental science and therefore not to be trusted. She urged closer linguist-teacher cooperation.

One last general article deserves mention. Jones (163) reviewed major trends in mother tongue instruction in the United Kingdom. After describing practices in various schools he listed (and in some instances described) twelve current research projects such as the activities of the Initial Teaching Alphabet (i/t/a) Research Unit at London University, the Nuffield Programme in Linguistics and English Teaching, and Bernstein's (23) sociolinguistic investigations which are described on page 74.

Linguistics and Reading

Publications which focused on linguistics and reading clustered around two topics: (a) background material which was based on research and, in a few instances, on subjective conjecture [redacted]) reading methods extrapolated from the writers' reviews of research.

Introductory and interpretative material. Little-known early historical background material of linguistic significance in reading instruction was mentioned by Fries (98) in *The Reading Teacher*. He then went on to discuss three potential contributions of linguistic science to reading:

1. A new and different approach to evaluating the language achievement of the pupils who are to be taught to read,
2. A new and different statement of the process and progress of reading achievement in terms of the language development of the pupil,
3. A new understanding of the basic relations of modern English spelling to the phonemic patterns of modern English sounds.

Teachers seeking lucid introductory statements further elaborating the present and potential impact of linguistics on reading will find that helpful, succinct statements have been prepared by such writers as Betts, Goodman, Lefevre, and Strickland.

Betts (25) succeeded in providing a great deal of specific information in the first of two recent articles reviewed (e.g., basic definitions of terms such as *phoneme*). In a second article (26), he listed five possible contributions of linguistics (e.g., a morphemic basis for teaching informative parts of words: *roots* and *affixes*) but pointed out that linguistics at present offers no satisfactory approach to certain goals of reading. For instance:

1. It does not reduce the increasingly wide range of pupil achievement and needs at succeeding levels of instruction;
2. It does not *per se* offer help on interest and other facets of motivation. "There isn't a shred of evidence, for example, that Bloomfield's descriptive grammar or Chomsky's generative grammar has a stronger appeal to students than traditional grammar."

In his article, Lefevre (180) forecast a synthesis of linguistic approaches to reading, while Goodman (113) summarized certain rather general contributions that he believes linguistics can make:

1. Linguistics can provide education with an accurate description of the language.

2. Linguistics can provide techniques for language and reading research.

3. Linguistics can provide new criteria for judging readability of reading material.

4. Linguistics and psycholinguistics can provide new insights into child language and describe accurately how children learn languages.

5. Linguistics can describe and explain the development of regional and social dialects of English.

6. Linguistics can provide sensitizing concepts that educationists and teachers can use.

In *Childhood Education,* Strickland (299) compressed much sound advice on "the task of teaching all children to read and doing so in a minimum of time and with maximum effectiveness. . . ."

Classroom teachers will appreciate Strickland's discussion of proposals, anent reading, as made by some linguists. She first cited the work of Bloomfield and Fries who were deemed to have essentially the same approach to reading with regard to:

1. Learning the letters of the alphabet, both upper and lower case forms.

2. Intensive practice on oral reading of regularly spelled words and sentences composed of these words. It is a systematic scheme of teaching symbol-sound correspondences with constant use of oral reading.

3. The point that "There is no emphasis on reading for meaning and little or no story content until the child has had many lessons on [phoneme-grapheme] correspondences. The process is solely that of turning the stimulus of graphic shapes into speech. When the child can do this he can read."

Next she contrasted the views of Harry Lee Smith, Jr., with those of Bloomfield and Fries.

1. Smith "would start children with experience stories until they have acquired a vocabulary of sight words, then follow a procedure similar to the others."

2. "He would, however, add a few irregularly spelled words, such as said, as sight words in order to make possible a thread of story content for children to read."

Dr. Strickland saw these proposals as a start in what may prove a highly significant direction. She mentioned one aspect of linguistics that "might well be applied in teaching reading" which often is omitted entirely by linguists who write about the early stages of reading. That is the matter of showing children the relation of pitch, stress, and juncture, or pauses, to the interpretation of meaning.

Many similar brief articles have appeared since around 1963. Among them are Durkin's (76) examination of linguists' proposals regarding reading and Wilson's (324) list of nine principles said to be basic to Fries's approach to reading (e.g., mastery of the alphabet by learning the special shape that identifies each letter and separates it from other letters is . . . an important prereading activity).

Also worthy of mention is Tabachnick's (307) review of alternate approaches to the teaching of reading—a paper presented at a University of Chicago Conference on Reading—and the elaborations made by Witty and by Creswell. Witty (326:106) endorsed Durkin's points that ". . . there seems to be no such entity as 'a linguistic approach to the teaching of reading' and [that] many of the individual proposals of linguists pose important questions that are still without an answer." He commented further that through research we should aim to try out the validity of the many alternatives and "aim to improve a complex and multi-faceted process—effective and meaningful reading instruction" (326:108). Creswell (59) said that at present any *one* approach to reading, whether Bloomfield-Barnhart, Fries, or others, was likely to be a misshapen and misbegotten method, but that any reasonable proposal should receive a hearing. He contended that ". . . the major difference between the proposal of Fries or that of Bloomfield and Barnhart and the approach of some series of basal readers is a difference in *method,* not, strictly speaking, a difference in attention to linguistic truth" (59:110).

To round out our résumé of general interpretations of linguistics and reading, mention is made of Devine's (71) useful 1966 summary of "Linguistic Research and Reading" in the *Journal of Reading.* He cites 39 periodical articles, mostly of recent date, which support three points made with respect to reading instruction elsewhere in this monograph: namely that linguistic research calls attention (a) to the primacy of spoken language, (b) to the importance of dialect, and (c) to the relationship between language structure and meaning (71:275).

Research in reading methods. The term *methods* is used here to designate a variety of research reports on such topics as linguistics and early reading, the comparative achievement of children respectively using "basal" and "linguistic" readers, and remedial reading practices.

Hildreth (136) has reviewed 23 publications with a bearing on linguistic factors which have some relationship to *early* reading instruction and reached the three following conclusions with implications for improving early (kindergarten-primary) reading experiences:

> 1. It is doubtful that a child can become a fluent reader, comprehending fully what he reads, without a good oral language foundation.
>
> 2. Large time allotments for improvement of oral language usage in the school program are justified.
>
> 3. Development of writing as an adjunct of reading is recommended.

Spelling can be an aid to sounding letter combinations, and word discrimination. Large time allotments are justified for written expression. Writing reinforces general language skills related to reading.

Comparative studies of "basal" versus "linguistic" approaches to reading instruction also have begun to appear. Sister Mary Edward (78) reported a study which sought to compare the reading achievement at a fourth grade level in two school districts using two different approaches: (a) an experimental group utilizing a modified linguistic method (based on Bloomfield) in addition to a composite basal approach, and (b) the control group which used only a composite basal method. Her samples included 810 children, 432 of whom were girls. The study followed established controlled research and assessment procedures which led Sister Mary to seven conclusions:

1. Both samples performed above the national norms on all reading tests.
2. The boys and girls of the experimental [linguistic] group recognized words in isolation more readily, used context with greater facility, had fewer orientation problems, possessed greater ability to analyze words visually, had greater phonetic knowledge than the boys and girls taught with the control method.
3. No significant difference existed between the two samples in their ability to synthesize words.
4. The experimental group read faster and more accurately, had larger vocabularies, comprehended better, were more able to retain factual information than the control boys and girls.
5. However, when the more complex comprehension abilities of organization and appreciation were examined, no significant differences were found between the two groups.
6. All the children benefited from the instruction under the experimental method, but those of average and low ability benefited more broadly than children of higher mental ability.
7. Girls gained slightly more than boys from the experimental method.

Two years later (1966) Sheldon and Lashinger (278) provided analogous data on the effect of first grade instruction using basal readers (Ginn), the Structural Reading Series (Singer & Co.), and Bloomfield-Barnhart's *Let's Read*. The Singer series was labeled "modified linguistic" and the Bloomfield-Barnhart books were designated as "linguistic." A total of 469 children from 21 central New York state classrooms were involved. Again, conventional control and testing techniques were used. Four points were made by the authors.

First, with reference to the treatment groups, no significant differences were found among M.A., C.A., and readiness scores. *Second,* no differences were found among these groups either in attitude toward reading or in achievement. *Third,* mean scores for the post-tests showed a wide range within the treatment group. (Statistical analyses had not been completed when this 1966 article appeared.) *Fourth,* when results of the tests used were examined, it appeared that boys were not different from girls in regard to reading achievement scores.

A "linguistic" or "phonemic" approach to first and second grade reading in Miquon, Pennsylvania, was described in *Elementary English* by Goldberg and Rasmussen (107), who drew on the ideas of various linguists who had interested themselves in reading. No evaluation of results was given.

Creswell and McDavid (61) advocated that teachers begin to experiment with the Bloomfield-Barnhart materials in view of certain advantages, but added the qualifying note that "The history of reading instruction casts strong doubt on any hope that this system is the ultimate, the panacea, in reading instruction." Creswell and McDavid (60) made further and favorable comments on the *Let's Read* materials a year or two later. Still later however (1964), writing in *The Reading Teacher,* Bateman and Wetherell of the University of Illinois (17) raised a cluster of objections to the Bloomfield approach or system:

1. Its dependence on an "automatic" rather than reasoned association between letters and sounds.
2. Failure to take into account the normal developmental sequence of mass action, individualism, and integration which forms the basis for planning the stages of reading instruction.
3. The exclusve use of the name, rather than the sound of the letters.
4. Too-rigid exclusion of all irregularly spelled words during early instruction.
5. Inadequate attention to instructional problems should the child have difficulty.

Continuing in the realm of reading, Goforth (106) studied selected trade books to determine their linguistic implications. Among her conclusions: while all of five 1965 trade books (identified as outstanding in the *Children's Catalog*) contained some oral structural patterns commonly used by six year olds, more often than not the patterns were not congruent with children's actual contemporary usage. Irregularly spelled high-frequency words also continue to be extensively used in the books analyzed.

Two public school reading specialists, Wilson and Lindsay (325), have described their efforts to apply linguistic procedures to remedial reading at the junior high school level and report encouraging but empirical results.

A succinct, informative 1967 article by Downing (73a), Director of the Research Unit at the University of London, is an important updating of developments in the Initial Teaching Alphabet research. He cites three main conclusions regarding i/t/a published in 1967 and presents what he calls "truly remarkable" superiorities in the reading ability of i/t/a students by their second year in school. After the transition to "t.o." (traditional orthography), Downing notes, ". . . achievements in t.o. reading of the i/t/a students are not worse than those of t.o. pupils, and by the end of [the] third year the average i/t/a pupil has regained a lead over the average t.o. student" (73a:263).

Turning to reading and oral language, Raven McDavid, Jr. (210) examined one of his special interests, dialectology, with reference to the teaching of reading. He noted the dialect differences in American English room.

Lloyd (189), writing in *Education,* discussed intonation and reading, making the point that intonation is an important clarifier and bridge between speaking and reading.

Goodman (112) also dealt with oral language and reading in an applied linguistics study made in suburban Detroit. Characterizing reading as a psycholinguistic process, Professor Goodman studied 100 children to ascertain how individual experiences and abilities influenced their ability to use language cues. Inferences from his findings, according to the author, included the following:

> 1. Introducing new words out of context before new stories are introduced to children does not appear to be necessary or desirable.
>
> 2. Prompting children or correcting them when they read orally appears to be unnecessary and undesirable. . . .
>
> 3. Our fixation on eye fixations and our mania for devices which eliminate regressions in reading seem to be due to a lamentable failure to recognize what was obvious in this study: that regressions are the means by which the child corrects himself and learns.
>
> 4. Shotgun teaching of so-called phonic skills to whole classes or groups at the same time seems highly questionable in view of the extreme diversity of the difficulties children displayed in this study. No single difficulty seemed general enough to warrant this approach. In fact, it is most likely that at least as many children are suffering from difficulties caused by overusing particular learning strategies in reading as are suffering from a lack of such strategies.
>
> 5. The children in this study found it harder to recognize words than to read them in stories. "Eventually I believe we must abandon our concentration on words in teaching reading and develop a theory of reading and methodology which puts the focus where it belongs: on language," Goodman stated.

The view that the movable stress patterns of English give structure words more than one pronunciation was expressed by Pival and Faust (247) in an *Elementary English* article. Karlsen (165) in *The Reading Teacher* persuasively argued that "no method of teaching reading is universally the best." He further contended that ". . . we probably cannot speak of a 'linguistic approach' at the present time since we are not entirely in agreement as to what this might be." In view of the literature, this appears to be a highly reasonable statement!

An effective comment which serves to close this section was made by Sumner Ives in the December 1964 issue of *The Reading Teacher*.

> . . . any successful method of teaching reading is necessarily a linguistic method, for its purpose is to teach the comprehension of linguistic material. It must adopt some views about the nature and details of this material. Current methods differ, however, in the linguistic views which they assume; some are based on the traditional content of the language arts program, while others select details from more recent linguistic scholarship. Persons developing methods are, or should be, guided by considerations of accuracy and of strategy. In principle, the field of language study is responsible for accuracy and that of reading instruction is responsible for strategy (160:179).

Grammar, Spelling, and Usage

In recent years a large number of articles and a few key research publications have appeared to forge links between linguistics and classroom practices in grammar, spelling, and usage.

Useful general statements appearing during the past few years were published by Smith (281), Emig (79), Sister Mary Roselyn (265), Botel (36), Bierbaum (27), and Carlsen (47). Although these writers cite current research and opinion they do not report on specific research projects that they have conducted. Of the same genre are articles by Gleason (105) and Evertts (84). Gleason, in the *Harvard Educational Review,* takes a close look at grammar, suggesting five needs: (a) greater depth in the grammar program, (b) an upward extension of the scope of grammar, (c) broadening of the concern of grammar teaching to comprehend more than a single form of language, (d) broadening of the curriculum to permit greater attention to syntax, phonology, dialectology, and the historical development of language, and (e) basic changes in classroom methods of presenting grammar. Evertts's article considers how the teacher can set about gaining essential knowledge about language, particularly the English language.

Grammar. A USOE research report by Strickland (297) on the contribution of structural linguistics to the teaching of reading, writing, and grammar has been widely cited and of decided influence since its appearance in 1964. Several pages of conclusions (297:20-23) are too lengthy to reproduce, but merit a reading of the original document.

Also of interest are Menyuk's (221) study of preschool and primary age children to ascertain whether Chomsky's model of generative grammar could be used to provide a scheme for describing the language of children, and Mooney's (226) report on applying generative grammar in grade four. Brown and Bellugi (41) analyzed the complexities of the child's acquisition of syntax in a study supported by the National Institute of Mental Health, and Allen (6) has described "sector analysis" as a means of helping students understand relationships among sentence units.

Spolsky (287), in an article of general interest, described a plan for computer-based instruction. He set forth the possibility of combining two programming techniques and stated that it is possible ". . . to set up an automated teaching program [in grammar] that will permit branching on the basis of the responses that the student constructs himself" (287:144).

Concluding reference should be made in this section to an article by O'Donnell (232) who reviewed, in *Education,* several studies with a bearing on grammar. The work was supported in part by a USOE Cooperative Research Program grant. His conclusions follow:

> 1. The results of the investigations reviewed do not settle the question of the practical value of teaching grammar.
>
> 2. They do not prove that structural grammar is more effective than traditional grammar.
>
> 3. They do indicate that ability in reading and writing is about equally related to awareness of grammatical structure and ability to verbalize knowledge of traditional grammar.
>
> 4. They add to the body of statistical evidence indicating that knowledge of grammar does not correlate highly with ability to write and read.
>
> 5. It is hoped that the work of structural linguists will result in grammar textbooks that will enable students to obtain an adequate understanding of the structure of the language, and it seems reasonable that such an understanding would enable a student to improve his reading and writing skills.
>
> 6. It is extremely doubtful that mastery of either structural or traditional grammar will automatically result in proficiency in reading and writing.

Spelling. Promising work by Paul and Jean Hanna (129) was unveiled in the spelling field during 1965 and 1966. They dealt with the application of linguistics and psychological cues in an article which also spelled out the design of Paul Hanna's USOE study (Cooperative Research Branch) which is mentioned below. According to the Hannas, contributions from linguistics and learning theory point to spelling programs which:

1. Start from the child's possession of a large aural-oral vocabulary;
2. Teach him how to break these words into component sounds;
3. Lead him to discover the correspondences between the phonemes and the alphabetical letters that have come to represent these sounds in standard American-English spelling;
4. Help him discover the influence that position, stress, and context have in the choice of a particular grapheme from among the several options;
5. Guide him to go beyond the phonological elements such as compounding, affixation, or word families;
6. Teach him to build a spelling power that should make possible a writing vocabulary "unlimited" or limited only by the size of his spoken vocabulary.

"Unless or until the orthography changes to correspond with changes in the sounds of the oral code," the Hannas say, "the teacher must help pupils bridge the gap between oral and written speech, using whatever strategies are most effective" (129:759).

Hanna (128), in the *National Elementary Principal,* has given a preview of his USOE Project No. 1991, a report of which became available late in 1966 (130). It was a depth analysis of 17,000 words which showed that relatively few words in the sample offered phonological or morphological cues for spelling. However, ". . . the correct graphemic option can be predicted for a given occurrence of a phoneme, in these 17,000 words, approximately 90% of the time when *the main phonological factors of position in syllables, syllable stress, and internal constraints underlying the orthography* are taken into consideration" (128:21). Of equal or greater interest was phase II of the Stanford study which took the findings of the first study and used them to *predict* the standard spellings of different words.

Hanna states that:

> Research Project No. 1991 to date suggests that a high degree of regularity does exist in the relationship between phonological elements in the oral language and their graphemic representation in the orthography. A pedagogical method based upon aural-oral cues to spelling (and reinforced with eye and hand-learning) may well prove to be more efficient and powerful than methods that rely primarily upon the visual and/or haptical learning approaches while ignoring the essential alphabetical structure for the encoding or written form of the language (128:22).

Some readers will be interested in Rohner's (263) ideas for developing what he calls Fōnetic English Spelling (FE) and which is loosely analogous to various new alphabet concepts already discussed (see p. 42 ff.). Rohner's FE spelling of the first sentence of Lincoln's *Gettysburg Address* reads thus:

Fōrscōr and sevun yērz agō our fawthurz brawt fōrth on this contunuunt a nū nāshun, cunsēvd in liburti and deducătud tū th propozishun that awl men r crēātud ēcwul (263:36).

Other reports with implications for spelling appear in the next section.

Usage. The label "usage" is selected here to introduce publications that have treated the ways in which children employ language and certain factors, such as social class, which influence usage.

General statements on the use of language are represented by a booklet jointly sponsored by the Association for Childhood Education International, the Association for Supervision and Curriculum Development, the International Reading Association, and the NCTE. With Mackintosh serving as editorial chairman, the booklet, *Children and Oral Language* (196), broadly reviewed listening and speaking.

More directly related to grammar and usage, a statement by Strickland (302) in *The National Elementary Principal* provided a succinct overview. A representative point from the article: "The early learning of language is intuitive; the child is not aware of the structure of language nor of how he learns it. The child of a college professor of English and the child from a culturally deprived home learn equally well what there is to learn."

Cammarota (45) discussed the general importance of stress and word grouping in speaking as well as writing, and Tyler (311) emphasized in *Education* the need for a good grounding in oral language as a prerequisite to successful reading.

Language and the social environment concerned several scholars in recent years. Among them are Bernstein, the British sociologist, Labov, and Loban. Bernstein (23) identified and studied linguistic codes as mediated by social caste. The socially derived language problems of lower working class children, he indicated, were aggravated by a *restricted code* of language as distinct from the *elaborated code* with larger vocabulary, greater organization, and better opportunities for conveying explicit meaning which was available to upper class children.

Labov (169) set himself the task of determining the extent to which there were stylistic variations within established dialect groups. He ascertained that in a given major socioeconomic stratum (unique from other strata with respect to dialect patterns) there were at least four discernible styles of usage that could be recognized: (a) *careful,* (b) *casual,* (c) *reading,* and (d) *word list.*

In 1966 Loban (192) published research sponsored by the NCTE which also had a bearing on social class and dialect factors affecting classroom teaching. The 72-page report presented several "key findings" such as: (a) the fact that inability to use standard English limits economic opportunity, (b) that users of social class dialects most commonly have difficulty with verbs (notably *to be*), and (c) that as they mature and use more complex utterances, children encounter increasing problems of coherence as longer units of expression are used.

Information concerned with the language development of children and youth was abundant insofar as research in English usage was concerned. Loban's (191) 1963 NCTE report was one of the important publications reviewed. Data assembled supported a large number of conclusions, the following being examples:

> Those [children] who are high in general language ability are also high in reading ability. . . . writing ability is related to socioeconomic position. . . . The highest correlation in the study is between vocabulary and intelligence. . . . Competence in the spoken language appears to be basic for competence in reading and writing.

The study of elementary school children's language completed in 1962 by Strickland (300) also must be considered a milestone of the 1960's. Chapter V of the 131-page report sets forth a number of conclusions of which the following are a small sample: (a) children at all grade levels use a wide range of language patterns, (b) certain patterns which children used with great frequency appear to be basic building blocks in their language, (c) these basic patterns were combined in phonological units with other patterns in a wide variety of ways (300:102).

Among other articles and studies that deserve mention are Joos's (164) informative article in the *Harvard Educational Review* which identifies stages in which a native language is learned, and Brown and Berko's (42) work with primary school children which ascertained that syntactic consistency was evidenced earlier with count nouns (e.g., *table, man*) rather than with mass nouns such as *sand* or *milk.*

Hunt's (152; 153) work with the T-unit has attracted considerable attention, too. (This is defined as a "minimal terminable syntactic unit" consisting of one main clause plus whatever subordinate clauses that are attached to or embedded in it.) Using the T-unit, he has examined the writing of children at various grade levels. Students of language also will want to be familiar with the Fraser, Belugi, and Brown (95) inquiry as to whether an understanding of language precedes production (it does, they concluded, if production is construed to eliminate imitation), and the descriptive and longitudinal study by Welch (320) which dealt with the basic patterns of children's sentence structure over a four year interval between 1962 and 1966. Also of interest was Riling's (258) comparative Research Project No. 2410 (USOE) concerned with contrasting the language in children's textbooks with their actual oral and written language in grades four and six.

Space permits mention of one more study, the O'Donnell, Griffin, and Norris (234) Carnegie-sponsored analysis of the language of children in kindergarten and in grades one, two, three, five, and seven. While their long report cannot be compressed here, some interesting conclusions were: (a) that control of syntax is reflected in the length of T-units (cf. reference to Hunt's research above), (b) that the assertion, made by some linguists, that normal children have a full command of the grammar of their native tongue is open to doubt, (c) that progress toward mature use of language occurs at an uneven rate, (d) that sex differences in language development are negligible, and (e) that advances in control of syntax in writing exceeded those reflected at a given time in oral usage.

For the Teacher's Personal Library

If a monograph such as *Linguistics and the Classroom Teacher* succeeds in quickening the interest of the reader in the study of language, he will probably wish to dip into some of the excellent, informative books that have in one way or another enhanced our understanding of the magnificent invention—language—which has endowed human beings with so much of their humanity.

Herewith is presented a short list of widely available books for the reader interested in linguistics but not wishing to submit himself, at least not at the outset, to treatises aimed at advanced students or scholars engaged in the scientific study of language. To conserve space, only authors and titles are mentioned in the text. Full bibliographic information is given in the references at the end of the booklet.[3]

General background books for the casual reader. Two paperback books serve exceptionally well to bring the reader an overview of the field of linguistics. The first of these is *Linguistics and Your Language* (1960) by Robert A. Hall, Jr. It is well-written and free of obscure terminology. Charlton Laird's *The Miracle of Language* (1960) covers much similar territory, but suffers a little from overly cute phrase-making. Sample chapter headings: "The Gods Who Trouble the Waters of Our Voice Stream" and "The Speech that Blooms on the Tongue, Tra-La, Has Little To Do With Case."

[3] An annotated bibliography of approximately 70 books dealing with language and linguistics *and now available in paperback edition* appeared during the summer of 1966. It was compiled by Frank A. Rice (256), director of the Office of Information and Publications of the Center for Applied Linguistics, 1775 Massachusetts Avenue, Washington, D.C. 20036.

An outstanding collection of varied and valuable articles is Harold B. Allen's *Readings in Applied English Linguistics* (2nd ed., 1964). It is a small library in itself. Also recommended is *Essays On Language and Usage* (2nd ed., 1963) compiled by Leonard Dean and Kenneth Wilson. Readings of a breadth intended to encompass the sprawling field of communications theory have been selected by Alfred G. Smith in his 626-page volume, *Communication and Culture* (1966).

If you have a reasonable amount of time to invest, H. L. Mencken's fascinating repository of information, *The American Language,* is rewarding reading. (The 1963 abridgment done by Raven I. McDavid, Jr. contains enough of the original editions to satisfy many readers.) The scholarly but readable vintage reference material compiled by James B. Greenough and George Lyman Kittredge in 1900 is now out in paperback (1962). The title: *Words and Their Ways in English Speech.* "Popular" treatments that will interest many readers but which have been severely criticized by some linguists as containing certain misconceptions and oversimplifications are Mario Pei's *The Story of Language* (1949) and Lincoln Barnett's *The Treasure of Our Tongue* (1964). They are listed with cautionary restrictions. Oscar Ogg in *The 26 Letters* (1964) concentrates on the story of alphabets in a delightful style. Current, clearly presented, and helpful to teachers and parents is *How the "New English" Will Help Your Child* (1966). It is in the "Family Life Library" series published by the Association Press, 291 Broadway, New York, New York 10007.

Miriam B. Goldstein has written a book for parents, *The Teaching of Language in Our Schools* (1966), which includes a good deal of material on linguistics. A smooth-flowing exposition of linguistics in the elementary school is Pose Lamb's *Linguistics in Proper Perspective* (1967) which reviews the current impact of linguistics and suggests implications for reading, spelling, and grammar. H. A. Gleason, Jr., in *Linguistics and English Grammar* (1965), in the first four chapters of a 20-chapter text, presents one of the best recent treatments of linguistics and English instruction. His lucid but technical material in later chapters also places his volume in the second category of readings which follows below.

Technical but readable. Over the years a number of important books have appeared in the field of linguistics. Each has in one way or another proved significant because it has illuminated, expanded, or redirected man's knowledge of English.

One such benchmark book was Otto Jespersen's *Growth and Structure of the English Language* available now as a paperback in its ninth edition (1960). Also of significance to the literate but linguistically unsophisticated reader is *Language History* (1965), a paperback reprinted from

Chapters 17-27 of Leonard Bloomfield's definitive 1933 volume, *Language*. Outstanding and recent is Albert H. Marckwardt's *Linguistics and the Teaching of English*, published by the Indiana University Press in 1966.

Charles Fries's *The Structure of English* contributed significantly to "structural linguistics" and hence is valuable reading material. Also important is W. Nelson Francis, *The Structure of American English* originally published in 1954 and reprinted several times since. H. W. Fowler's *A Dictionary of Modern English Usage* (2nd ed., 1965) is an effort to update a definitive 1926 reference volume of considerable influence. Its value, like that of the *Oxford Dictionary* is as a desk reference rather than as casual reading.

Several persons have endeavored to interpret Noam Chomsky's transformational-generative grammar (cf. his *Syntactic Structures*, 1957). Owen Thomas's *Transformational Grammar and the Teacher of English* (1965) has been among the widely read commentaries. Emmon Bach's *An Introduction to Transformational Grammars* (1964) is also suggested for the serious and advanced reader. Paul Roberts' *English Sentences* (1962) designed for high school students is, according to the publisher, "based on transformational grammar," although some linguists have questioned this contention.

Although Alfred Korzybski's *Science and Sanity* is the basic treatment of general semantics, many readers will prefer the far more simple and readable presentation made by Irving J. Lee in *Language Habits and Human Affairs* (1941) or even Catherine Minteer's 128-page booklet, *Words and What They Do to You* (paperback edition, 1965).

Three additional books round out this roster of readings for teachers seeking to improve their basic knowledge of linguistics. One is J. R. Firth's *The Tongues of Men and Speech* (1964). This is a republication of Firth's *Speech* (1930) and his *Tongues of Men* (1937) which have been compared to Sapir's *Language* in durability. A second is M. A. K. Halliday, Angus McIntosh, and Peter Strevens, *The Linguistic Sciences and Language Teaching* (1964). Nelson Brooks's *Language and Language Learning* (1961) is yet another useful book which touches on many elements of language learning.

The opening sentence is a gem: "Language, like sleep, is not a substance but a process; in practice it is known to everyone, yet its theory all but defies formulation" (39:1).

Chapter VI

Linguistics and English Instruction in the 1970's: Some Conjectures

IT is pleasant to conjecture with respect to the shape of tomorrow—especially since the process of conjecturing involves no bibliographic labors and can be carried forward without the handicap of exact knowledge as to what actually will happen in the next decade.

In the following pages we will project developments in English language arts instruction that seem likely as our schools move into the 1970's. While hypothetical, the conjectures are "educated guesses" in the sense that they are for the most part based on research and opinion (often cited in earlier chapters) which suggest these future trends.

Developments in the Field of Linguistics

It seems likely that the following developments with a bearing on the work of elementary or secondary school teachers and on curriculum directors will occur in the field of linguistics and among the ranks of professional linguists in the years immediately before us:

1. More ranking linguists will direct their attention to applied linguistics in the context of elementary and secondary school instruction.

2. Both English and linguistics departments will offer new service courses for prospective teachers.

3. Linguists and professional educators will collaborate on one or more promising and perhaps definitive books exploring or setting forth implications of linguistics for mother tongue instruction.

4. In cooperation with linguists, various professional organizations such as the National Society for the Study of Education will produce several Yearbooks and guides treating linguistics. (The NSSE already has projected a 1970 Yearbook dealing with language and school programs and which is under the chairmanship of Professor Albert H. Marckwardt of Princeton University.)

5. There will be at least some synthesis of the concepts and precepts of

Latinate, structural, and transformational-generative grammar as suggested by Noam Chomsky (cf. p. 60).

6. Efforts will be made to produce a definitive list of phonemes for the English language.

7. Further study will help clarify some present disagreement regarding phoneme-grapheme correspondences in reading and spelling.

8. Increasingly clear and helpful books by linguists will reinterpret "old" and "new" grammars and their relationships to the teacher's work.

9. Departments of Linguistics, Education, and English will cooperate in creating coordinated programs designed to extend and deepen the elementary and secondary teacher's grasp of language.

10. Many books for teachers and children treating language instruction will have linguists listed as consultants or coauthors.

11. More attention will be given to research which is designed to improve school programs for children with non-standard language backgrounds: creole or cajun for example.

12. Because of the interest awakened by so-called "linguistic approaches" in children's materials such as readers, spellers, and grammars, a number of linguists will continue to publish classroom material, at least some of which will be semi-programmed.

13. A number of articles and small books will appear, from linguists' pens, suggesting ways teachers can improve spelling, writing, reading and so on. Some will be very good but a number will be limited in value because the writers are unfamiliar with child development research, with classroom practice, and with the spectrum of individual differences in children.

14. The sociology of language will be the object of increased research and commentary.

15. Interest will be sustained and expanded (in the context of the schools) in relation to thinking and behavior: i.e., the fields of psycholinguistics and metalinguistics.

Innovations and Changes in Professional Education

As linguists, English professors, and educators continue to interact, a number of changes may be anticipated in school practices, in college programs, and in related educational theory. Among changes to be anticipated in professional educational programs in teacher education, educational research, practice, and theory are the following:

16. With the added incentive of Operation Head Start, educational research will increase with respect to inquiries into the language usage of early childhood and early language development.

17. Increased interest in the underprivileged and linguistically deprived

will be reflected in new programs and ventures to improve educational and economic opportunity.

18. Familiar types of research in the language arts will continue, but much of it will be influenced by linguistic theory and terminology.

19. During a transitional period, as some linguists had noted by the mid-1960's, there will be continued oversimplification, misinterpretation, and lack of understanding on the part of some teachers and professors of education seeking to recast linguists' ideas and jargon in familiar educational terms and contexts. This will diminish after 1970.

20. Following a period of occasionally uncritical and even indiscriminate acceptances of anything labeled "linguistic" (already on the wane in 1967), professional educators will carry on increasingly sophisticated research involving the application of linguistic theory to educational problems and premises. Over a 10 year period this will lead to a winnowing of proved and valuable practices and ideas and a more stable and accepted place for important changes that were largely at the discussion stage during the first half of the 1960's.

21. Teacher education courses in English education and elementary school language arts methods will be modified rather rapidly to infuse them with some information about the scientific study of language. This will prove inadequate, in many schools of education, for a few years. Courses offered by linguistics departments but designed for teachers will help to avoid trivializing linguistics at least until better-formulated courses are developed in education departments.

22. As a natural concomitant, college level language arts textbooks will begin to conform to changes such as are implied in the preceding paragraph.

23. With the pressure generated by current changes in science and mathematics courses at the college level further increased by proposed changes in language arts preparation in teacher education, more extensive restudying of college curricula will be required. This is essential if changes of recent years are to make the best possible sense. The trend toward five years of preservice preparation will increase sharply in view of competition for the student's time.

24. Colleges and universities will be called on to help in an increasing number of public school in-service education programs. Such services in a few instances will be uneven in quality for several years to come since some linguistics and education professors have not yet become well-informed, respectively, with classroom methods and linguistics.

25. Funding agencies such as foundations and the U.S. Office of Education will continue to support language-centered research generously, but proposals will be subjected to increased scrutiny to insure that they have promise.

Mutations in Elementary and Secondary School Programs

Since the most important goal of the improvements sought in mother tongue instruction is better language experiences for children and youth, probable changes in programs at the elementary and the secondary levels are matters of major interest. Trends, research, and opinion reflected in earlier chapters support a number of inferences which are listed below.

At the elementary school level:

26. Following some negative reactions in the late 1960's (often due to premature introduction of unproved materials), there will be greatly increased use of instructional tools and publications for children that are based upon linguists' recommendations and a growing body of research in education and linguistics.

27. By the 1970's an orderly synthesis of currently competing linguistic theories will be mirrored in the materials used. This will be especially true with respect to the "new" grammars, less so in reading.

28. For at least several years the matter of changes in early reading instruction will be a controversial topic. An example of a basic issue: that of early rote learning (e.g., the alphabet; phoneme-grapheme relationships) versus more of a "meanings approach." Probable outcome: more meaningful ways of approaching early acquisition of linguistically important learnings.

29. Teachers' interest in what is read by children—the task of extracting information and "feeling" from the printed page—will not become subordinate to the mechanical processes of reading *per se*.

30. The fate of such innovations as the Initial Teaching Alphabet, UNIFON, and Words in Color is difficult to forecast. This is not a criticism of their merit but an assessment of the problem encountered when especially devised texts and materials are involved. Wide-scale use of these items seems less than likely by the early 1970's.

31. Spelling materials influenced by linguistic research seem likely to be extensive if not predominant in the 'seventies. A linguistic "patterns approach" (see p. 49 ff.) seems likely, although present frequency-of-use word lists also will continue to shape practice.

32. Much more will be done in the elementary classroom with *oral* English; with particular heed being given to juncture, pitch, stress, dialectology, and the role of gesture and expression in speech.

33. Prose and poetry will be used more widely not only for their long-recognized literary values but also as vehicles for conveying a deeper understanding of language and language change.

34. Eighteenth century normative grammar, long standard fare in the schools, will rapidly be replaced by a synthesis of the new grammars influencing practice since the 1950's.

35. While decent standards of usage will be maintained in the schools, what is "correct" will be interpreted more flexibly with respect to such usages as "It's me." At the same time there will be an increased use of *models* for questions of correctness. In other words, instruction will be based on *what actually appears* in the kind of writing that is presented as a model for the

students. Greater heed will be given to *functioning* varieties of what is being written and less attention given to textbook dicta, *unless such books reflect current usage in the kind of writing and speech that is being promoted in the class.* This will not be a lowering of standards, but an adjustment of them to realities.

36. In addition to the influence of linguistics, *per se*, the broad domain of communications theory will receive increasing attention at all age levels.

37. Much more general information about language will be communicated to pupils: e.g., material concerned with the history and geography of language, language families, how words change, loan words, how English is influencing other tongues, and so on.

At the junior and senior high school levels all of the conjectures made above with respect to changes in elementary education *also* apply—except, of course, those that pertain only to *beginning* language arts instruction. Projection of trends and interpretation of research data support the following additional hypotheses for time to verify at the secondary level:

38. There will be applications of linguists' proposals with respect to junior high school students who do not read and spell well, with special attention being given to problems engendered by linguistic deprivation.

39. More material dealing with historical and comparative linguistics will appear in English language arts classes (and textbooks) in grade 7 and above.

40. Curriculum changes will be made so as to provide more methodically for the instruction of the linguistically deprived student, thus increasing his employment and advanced educational prospects and reducing dropout problems.

41. During the eleventh or twelfth grades a course in linguistics will be available, at least as an elective, in a growing number of communities. More schools also will offer courses in general semantics and in psycholinguistics and metalinguistics, but without these labels. Possible popular course title: "Improving Communication Skills."

42. Attention in the secondary school classroom, when literature is studied, will focus on language change, the significance of dialects, and the relationships between language and behavior.

43. Teachers in *all* subject fields will become more aware of the need to examine and explain the application of communication skills to young adolescents.

44. At least one national curriculum study project will be published and focus on content changes in high school English suggested by linguists and professional educators. The recommendations will be sharply debated but, in general, will have a marked influence on practices of the 1970's.

45. Language laboratories, now largely restricted to second language study, will be created for use in mother tongue instruction. Programmed material, both for talented and slow learners, will be available. Most resources, however, will be for all students in the program: recordings of notable speeches, plays, poetry readings, dialectological materials, *et cetera.*

46. More emphasis on precise use of one's knowledge of language, skilled language performance, and measurable achievement will characterize trends in the immediate future. "Social emphases" and social group centered learnings will diminish proportionately in English classes. As new methods and procedures become secure and accepted, circa 1973, a reaction against heavy physical and psychological pressures for academic achievement in English instruction will become increasingly noticeable.

To the Stars—the Hard Way

Despite accumulating knowledge, much remains to be done to improve English instruction. Actually, as Carroll (50:577) put it, "The process by which children learn their native language is in many respects a mystery." We have yet really to understand how young people acquire their control over complicated language patterns.

So much yet remains to be accomplished that persons seeking the goal of significant improvement in the English language arts field might well adopt the state motto chosen by the early settlers in Kansas: *ad astra per aspera*—"To the stars the hard way." The creative work of linguists and professional educators in college or university promises to help improve the teaching of English. But on the testing grounds of the classroom most gains can be made and consolidated in only one way—the hard way.

Other persons can stimulate, suggest, and turn one's eyes upward; yet when all is said and done, teachers and curriculum workers must by themselves create the setting and provide the substance for the improved language learnings—the superior communications skills—which mankind needs.

The success of the "Quiet English Reformation," then, depends on what happens in U.S. classrooms during the years immediately ahead. It is the elementary and secondary teacher and the curriculum specialist who will determine which of today's conjectures become tomorrow's realities.

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Appendix A

Glossary of Linguistic Terms[1]

Acronym: a word formed from the first letter(s) of each part of a compound term; e.g., scuba: *s*elf *c*ontained *u*nderwater *b*reathing *a*pparatus.

Affix: a sound or sequence of sounds attached to the beginning or end of a word (prefix or suffix) or, in some languages, inserted within a word (infix).

Agglutination: the combining of independent words into compounds without marked change of form or loss of meaning.

Agnate: a word having a common origin with another; cognate.

Allo-: one of a group whose members together constitute a structural unit, of language.

Allograph: one of a group of graphic symbols; a letter of a given alphabet with a particular shape such as A-a. Also one of several ways of representing a phoneme by a letter or letters. (E. g., the *dd* in bidding.)

Allomorph: one of two or more forms that a morpheme has at different points in the language; e.g., the /əz/ of dish*es*, the /z/ of dream*s*.

Allophone: one of two or more variants of the same phoneme; e.g., aspirated "p" in pin and *non*aspirated "p" in spin are allophonic. Allophones are phonetically similar sounds that do not interfere with one another; subclasses into which *phones* are divided.

Auxiliary: one of a group of function words which combine with various forms of verbs to make verb phrases. In transformational-generative grammar, "auxiliary" has a meaning about like *predicate*.

Base: the simple or basic form of a word to which affixes are added; the primary root or the stem base.

Blend: a cluster of two or more adjacent consonants in the same syllable.

Cant: the special vocabulary of a particular group. Unlike jargon which *conveys* meaning, cant is designed to *conceal* meaning as in a discussion among thieves who wish to deceive eavesdroppers.

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[1] For convenient reference, terms such as "affricate" or "uvular" used in connection with generating speech sounds are listed together in Appendix D.

Classes of words: terminology used by certain structural linguists, such as C. C. Fries, to classify words by number rather than parts of speech to divorce modern structural linguistics from Latin grammar. (See discussion on page 33 ff.)

Cognate: a word having the same root as another word, usually in a different language. English *path* and German *Pfad* are cognates.

Coined words: word invented for a particular purpose; e.g., *zipper, pyrex.*

Colloquialism: a word, widely used in common speech, which would be considered too informal for use in formal speech or writing.

Common speech: the speech of the great majority of the community, those whose position is neither notably high nor conspicuously low. This does *not* imply that common speech is substandard or highly colloquial.

Consonant: a sound or a letter representing a sound produced by an obstruction or blocking or some other restriction of the free passage of air, exhaled from the lungs, through the oral cavity. If vowels are defined as "peaks of sonority," then consonants can be identified as sounds which accompany vowels, and which (when present) occur singly or in clusters at syllable boundaries.

Corpus: the collection of recorded utterances that is used as a basis for the descriptive analysis of a language or a dialect; also a body of writings on a particular subject such as linguistics.

Determiner: a limiting modifier of a noun or a noun "marker"; e.g., *the, an, both, a, few, many, several.* While some structuralists regard determiner as a class of word, it also may be regarded as a slot which may be manifested from certain classes.

Diacritical mark: a mark placed over, below, or across a letter to indicate the sound represented by that letter; used in combination with a letter symbol to produce a different symbol (e.g., "a" as in cat but "ā" as in cāke).

Diachronics: the study of language or parts thereof (sounds) as it changes or develops over a period of time.

Dialect: a specific form of a language spoken by the members of a single homogeneous speech-community; also called *class* or *social* dialect when persons speaking are of a certain social class; differs from the standard form of the language but not enough to be considered as a different language. In technical linguistic usage, *all* versions of a language associated with such factors as "region" or "class" are dialects of the language. Even the "standard" form is, in this sense, a dialect.

Digraph: two successive letters representing one phoneme; e.g., "ea" in lead, "ch" in chop.

Diphthong: two vowels which form one sound in a syllable.

-eme: significantly distinctive unit of structure of a specified kind in a language or dialect; e.g., morph*eme*, graph*eme*, phon*eme*.

Enation: refers to sentences identical in grammatical, syntactical, and structural relationships but differing in vocabulary. "The man drove the car" and "the cat ate the mouse" are enative sentences.

Etymology: that branch of linguistics which deals with the origin and history of words, tracing them back to their earliest determinable origin in the language group.

Etymon: the earliest known form from which a word or a part of a word has developed; also the foreign language source of a loan word.

Function word: a word with little or no lexical meaning which is used in combining other words into syntactic structures; Fries uses the term to cover all words not usually found in the subject, verb, predicate adjective, or adverbial complement position; e.g., prepositions and conjunctions. Technically, words that indicate classes of words and structures (and, sometimes, relationships between these), and which have varying degrees of semantic value, some part of which may be contributed by the context.

Generative grammar: cf. pages 34 to 36. Also cf. Transformational Grammar on page 54 ff.

Glottochronology: a method of deducing, on the basis of statistical comparisons, family relationships of languages, as well as the probable date when branches of a given language group separated from the common parent language; synonym for lexicostatistics.

Grammar: cf. discussion on pages 32 to 36.

Grapheme: The spelling of a phoneme; a significant unit of graphic shape; a minimum unit of the writing system, not able to be subdivided; e.g., the letter "d" in dime; the *ch* in chief or the *sh* in fish.

Graphemics: (also graphonomy) the study of systems of writing and their relationships to linguistic or phonological systems.

Heteronym: words with identical spellings but with different meanings and pronounciations; e.g., wind.

Homograph: words that are spelled alike but that have different derivations of meanings; e.g., *State* Fair; *My* Fair *Lady*.

Homonym: one of two or more words spelled alike and pronounced alike but with different meanings.

Homophones: words which sound alike, but have different lexical meanings and origins; e.g., to, too, two; hear, here; toe, tow.

Idiolect: a person's individual or personal way of speaking the common language.

Idiom: an expression peculiar to a language, conveying a distinct meaning, not necessarily derived from the generally accepted grammatical rules. A combination of words with a *unit* meaning not evident from the meaning of its parts. E.g., "give up" (surrender) gets its meaning neither from *give* nor *up* individually.

Inflection: a change in tone or pitch of the voice; transformation of a morpheme or word by changes in number, tense, gender, etc.

Intonation: significant variation in pitch from one part of an utterance to another.

IPA: *I*nternational *P*honetic *A*lphabet.

Isogloss: a line drawn on linguistic maps delimiting the area in which one may encounter given features of grammar, pronunciation, or vocabulary; analogous to an isobar on a weather map.

Jargon: words, expressions, and technical terms which are intelligible to the members of a specific group but not to the general public.

Juncture: the way in which the phonemes in a language are joined together in an utterance; the way an utterance begins and ends; cf. discussion on p. 14 ff. A vocal device for indicating groupings in a linear progression of vowels and consonants so that divisions into words and constructions—including sentences—can be perceived.

Kernel sentence: a declarative sentence in the active voice from which other sentences can be generated. (Also see discussion on p. 35.)

Kinesics: the study of nonverbal bodily movements which play a part in communication.

Langue-parole: early 20th century distinction made by French linguist Saussure; *Langue* refers to the *system* of a language; the patterned structure or formal conventions of speech that one must master; *Parole* is the actual spoken language: the *speech* which manifests it. (Also see p. 29.)

Language: a language is a structured system of arbitrary vocal sounds and sequences of sounds which is used, or can be used, in interpersonal communication by an aggregation of human beings, and which rather exhaustively catalogs the things, events, and processes in the human environment (49:31).

Lexical meaning: meaning of a morpheme or word apart from the meaning it acquires by virtue of its position in a larger structure; "dictionary meaning."

Lexicon: all the words or morphemes existing in a given language.

Lexicostatistics: cf. glottochronology.

Linguistic geography: the study of the regional distribution of linguistic features within a language area; includes the study of class differences within the region.

Linguistics: cf. definition on p. 2.

Loan-word: a type of linguistic borrowing in which the borrowing language imports both the phonemic shape and the word meaning, and modifies it in accordance with the meaning.

Logogram: a symbol, letter, or sign representing a complete word.

Logotactic: Greek: *logo*—of or pertaining to word; *tactic*—of or relating to arrangement or sequence of words. Also cf. Tactic(s).

Metalinguistics: cf. discussion on p. 3 ff.; the study of what people talk (or write) about and why, and how they react to it.

Microlinguistics: cf. discussion on p. 3; the formal analysis of language structure, which lays the foundation for metalinguistics.

Mnemonic: a device for helping, or meaning to help, the memory. E.g., using the sentence "*M*ary's *V*iolet *E*yes *M*ade *J*ohn *S*it *U*p *N*ights *P*lanning" to remind one of the names of the planets *M*ercury, *V*enus, *E*arth, and so on.

Morph: an instance of an allomorph which is (usually) a context-restricted form of a morpheme. Parallel to *phone*.

Morpheme, Morphemics, Morphology, and Morphophonemics: see page 14.

Morphotactics: of or pertaining to the rules determining the structural characteristics of sequences of morphemes.

Neologism: a newly coined and as yet not generally accepted word or expression; or the use of established words in a new sense.

Nonlinguistic context: the physical and social circumstances in which an utterance is made.

Nucleus: the most prominent unique minimal segment of a syllable; a kernel.

Orthoepy: the study of the pronunciation of a language; customary pronunciation.

Orthography: language study concerned with letters and spelling.

Parole: See *Langue-Parole*.

Parse: to analyze each word in a sentence with respect to its grammatical form and function in the sentence; to analyze a sentence grammatically as to elements and their interrelationships.

Philology: the study of written documents, especially the words and linguistic laws of historical written language.

Phone: a simple or basic vocal sound. Technically, a phone is an instance of an allomorph which is restricted by the context of the language setting in which it is used.

Phoneme, Phonemics, Phonetic, Phonology: See pages 13 to 14.

Phonetic alphabet: an alphabet in which a separate character is provided for every discernible kind of speech-sound. (See page 46.)

Phonetics: study and systematic classification of sounds made in spoken utterances. Includes *articulatory* phonetics, the vocal movements or positions producing particular sounds; also *acoustic* phonetics, the physical constituents or properties of utterances as revealed by instruments.

Phonic: of or related to or producing sound.

Phonics: a method of teaching beginners to read and pronounce by ascribing phonetic values to letters.

Phonological unit: a unit of speech (phrase, clause, sentence) with a clearly signaled termination.

Phonology: A general term that includes phonetics and phonemics. The study of changes of speech-sounds during a given period in the development of a language, considering each phoneme with respect to the part which it plays in the structure of speech forms.

Phonotactic: the area of phonemics which covers the structural characteristics of sequences; the description of the ordering or arrangement of identified phonemes.

Pitch: refers to different frequency levels in utterances; cf. discussion on p. 6.

Polysynthesis: a term in historical linguistics. Refers to a type of language characterized by multiple morphemes; opposed to classification of analytic or one-morpheme words, and synthetic or words with several morphemes (but not as many as polysynthetic morphemes).

Prelinguistics: cf. discussion on p. 3; a subdivision of macrolinguistics; the study of the biophysical bases of language sounds and relationships of the physics of sound to language sounds.

Prescriptive grammar: refers to attempts to derive and fix certain rules of usage on the assumption that change means deterioration in a language. A study or grammar of language which compares a living language with a "model" language (e.g., Latin) and prescribes how the living language should be used.

Prosody: the study of verse including metrical structure.

Rhetoric: the art of discourse.

Schwa: a vowel sound or a symbol used to indicate a vowel sound which is unstressed; written [ə] as in sep-ə-rate or in lit′ĕr-ə-chĕr. E.g., schwa is the symbol for the neutral or unstressed vowel in the first syllables of *above* and *connect.*

Semantics: the study of relationships between the forms of words and what they signify, including variations in significance. Can be descriptive or historical.

Sentence: a number of words arranged syntactically so as to constitute a grammatically complete sense unit.

Slang: a type of language, generally peculiar to a certain class, social, or age group, in fairly common use; produced by popular adaptation and extension of the meanings of existing words and by coining new words. Slang necessarily observes linguistic principles, but not formal standards or precedents of word formation.

Stress: accent on a sound or sound-group: cf. discussion on p. 7.

Structural grammar: the study of languages which analyzes the structures or patterns of spoken sentences and thereby describes the distinctive features of a language; cf. discussion on pages 33-34.

Structural meaning: meaning indicated by grammatical clues (such as word order and word form) which is combined with the "dictionary meaning" of the words, the result being the meaning of the utterance.

Supra-segmental (also written suprasegmental): the vocal effects of pitch, stress, and juncture, which accompany the linear sequence of vowels and consonants in an utterance. Cf. discussion on p. 14 ff.

Symbolic logic: in linguistics this is associated with the representation of certain logical principles with symbols so that deductions may be based on primary postulates and formation and transformation rules.

Synchronics: the recording and study or analysis of grammar, linguistics, phonemics as it is or was at a particular time.

Syntactic meaning: meaning of a morpheme or word acquired by reason of its position in a sentence.

Syntax: study of the way words are arranged to form phrases, clauses, and sentences; the ordering or arrangement of morphemes.

Tactic(s): of or relating to the arrangement or sequence of words. (Also cf. Logotactic.) The study of the grammatical relations within a language including morphology and syntax.

Tagmemics: theory of grammar that looks at a sentence as composed of a certain number of tagmemes or "functional segments," each of which consists of a "functional slot with its class filler." Such a theory is advanced to explain that two sentences such as *John hit Bill* and *The man at the window is buying the tickets* somehow have the same fundamental structure.[5] "Tagmemic analysis is a slot-and-filler technique combined with certain characteristic views of the general language system," according to Gleason (104:140-41).

Taxeme: in the study of syntax, a *unit* of *order*.

Transformational Grammar: one kind of generative grammar, using the procedure of beginning with a basic simple sentence and showing a number of transformations or changes, such as active voice to passive or modifying word to phrase to clause. See further discussion in text, pp. 34 to 36.

Utterance Unit: an act of speech; a grammatically unified linguistic statement preceded and followed by a pause.

Vernacular: cf. "common speech."

Word: a general term covering any linguistic form considered to be independent in distribution and meaning and capable of being written with space on either side.

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[5] The definition-explanation is adapted from J. B. Carroll, *ibid.* (49). See bibliographic references.

Appendix B

Symbols and Conventions Used by Linguists[1]

WRITERS tend to vary somewhat with respect to the symbols they use and to the conventions they employ. The items reproduced here are among the more common of those used in linguistic writing. The list is not comprehensive and whether a symbol is "correct" depends to some degree on whose book one consults. The material here should nonetheless be a helpful guide to understanding most writing on the technical aspects of phonetics.

/ /	diagonals enclose phoneme symbols
[ ]	brackets enclose sounds which are not phonemic
[p^h]	superscript *h* indicates an aspirated stop
[$p^=$]	superscript bars indicate an unaspirated stop
/ ‹ /	indicates an aspirated articulation
:	colon used to separate pairs of various types
/ ′ /	primary stress mark
/ ˘ /	weak stress mark
/ ˋ /	tertiary stress mark
/ + /	open transition between utterances, related to stress
/ ∧ /	secondary stress mark
/ * /	within the diagonal slashes to indicate an impossible or unknown phonemic representation
/ # / or / → /	fading; rapid decrease in both pitch and volume; terminal juncture; often marking end of utterance
/ ‖ / or / → /	rising; rapid, sudden, and short rise in pitch with volume not diminishing but cut off sharply; a terminal juncture
/ | / or / → /	a terminal juncture; sustained; sustention of pitch with prolongation of last syllable and some diminishing of volume
/ 2 /	mid; normal pitch

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[1] Books from which symbols and conventions were drawn include those by Francis (94), Gleason (103), Hill (138), and Hockett (141).

/ 1 /	low; usually two to three notes below / 2 /
/ 3 /	high; normally two to three notes above / 2 /
/ 4 /	extra high; two to three notes or more above / 3 /

Occasionally this sequence of numbering pitch is reversed

/ (2) /	parenthesis indicates that / 2 / will occur if there are syllables before the primary stress, but not otherwise
~	"varies with" or "alternates with" or "or"; usually used to indicate allomorphs of a morpheme
{ }	braces enclose a morphemic representation in which one symbol is chosen to represent each morpheme and its allomorphs, therefore not a guide to pronunciation

Italics indicate orthography or spelling

' '	indicate glosses, translations, or other indications of meaning of items
/ -s /	dash before a symbol indicates a suffix
/ in- /	dash after a symbol indicates a prefix
/ -o- /	marks before and after a symbol identify it as a stem formative or meaningless affix whose purpose is to unite meaningful affixes to a root
ø	indicates absence of . . .; zero
←	means "replaces" as / aw ← (ay) / and read / aw / replaces / ay /
/ m̥ /	circle under a symbol indicates voiceless symbol
/ ṃ /	dot under letter indicates retroflex or backward shift in point of sound articulation of consonant
/ g̯ /	crescent under symbol indicates shift forward in point of sound articulation for *consonants*
/ a̯ /	crescent under symbol indicates nonsyllabic position when beneath a *vowel*
/ · /	dot indicates vowel somewhat longer than shortest version
/ : /	an even longer vowel
/ :: /	an extra-long vowel
/ ◡ /	under symbol; indicates a rounding of a vowel sound
/ ◠ /	under symbol; indicates an unrounding of a vowel sound
/ ~ /	above symbol for nasalization of vowel sound
/ – /	under symbol; called fortis or tense; beneath consonant symbols indicates a stop
/ -- /	under symbol; called lenis or slack; indicates reduced tension on consonant symbol
/ † /	superscript dagger identifies a special group of . . . (usually consonants)
>	"becomes" or "changes to."

Appendix C

Modern Language Families[1]

APPROXIMATELY 3,000 languages can be identified, depending on the criteria that are used to determine a language, as distinct from a dialect. Many of these languages exist in both spoken and written form. Every continent has some, however, which exist only in an oral form and are spoken by very small and relatively isolated groups. Examples are the several North American Indian languages spoken by as few as 500 to 700 persons, who usually speak English as a second language.

Comparative linguists have attempted to group languages into families according to their common ancestry. Sometimes it is difficult to establish such relationships, and in some instances there is disagreement among scholars as to which family a particular language belongs. It is probably sufficient for the teacher to know that the major language families of the world include languages spoken by all but about 5 percent of the world's people.

Most widely spoken by most people is the **Indo-European** family, so named to identify India as the probable origin of the family and to emphasize later European development of the languages that it includes. Eight branches of the Indo-European family contain languages spoken by over one and one-half billion persons: *Germanic* or Teutonic, of which English is an example; *Romance* or Latin derivative languages; the *Balto-Slavic* of the U.S.S.R. and several of its eastern European neighbors; *Celtic* from far corners of the British Isles; *Greek; Albanian; Armenian;* and *Indo-Iranian* from India, Iran, Pakistan, and other nearby areas.

Another family with about one-half as many speakers is the **Sino-Tibetan** family which includes the many Chinese languages. Vietnamese may be of this family though the relationship has not been proved.

The **Malayo-Polynesian** family is a geographically widespread one and

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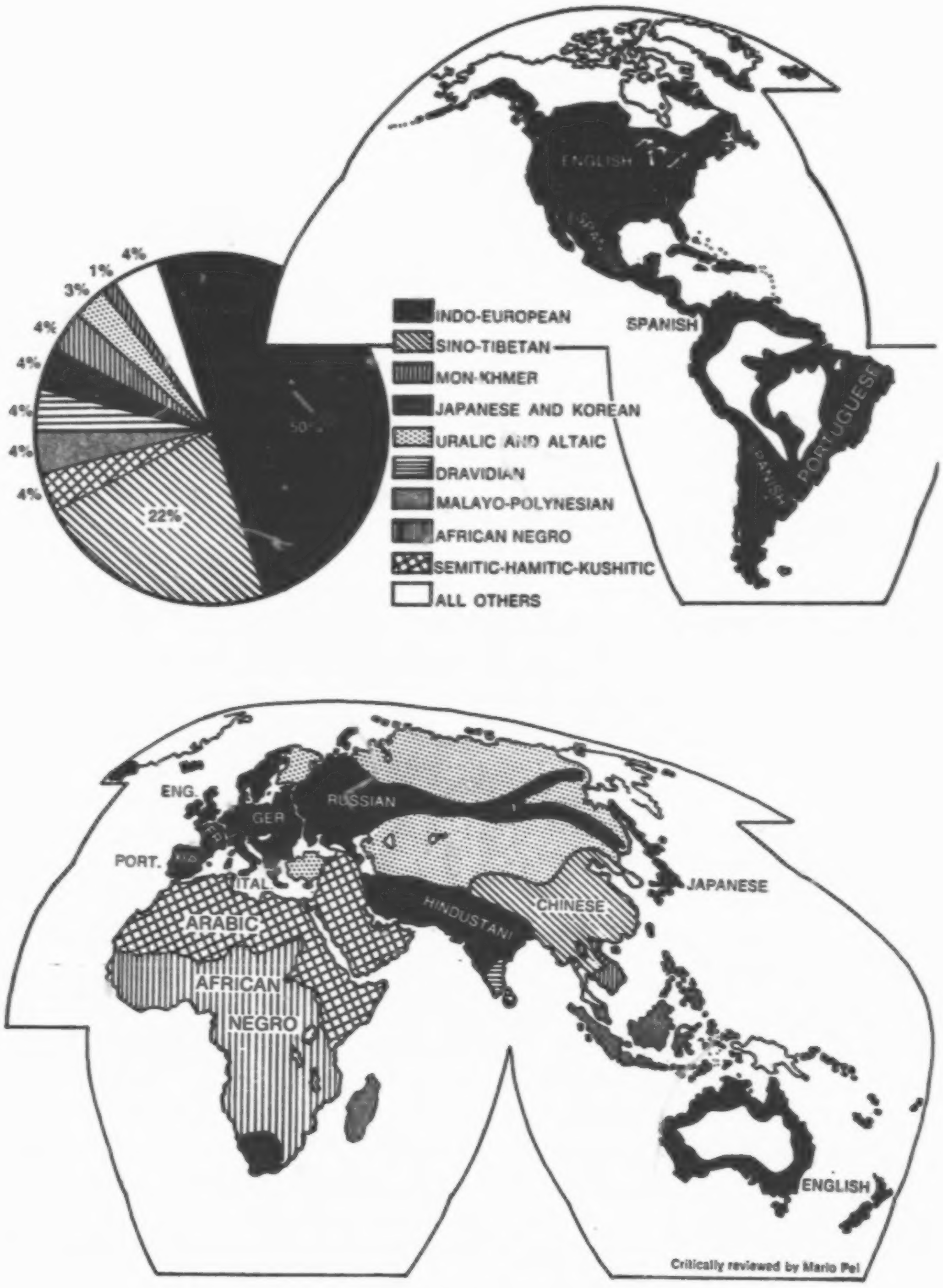
[1] Material compiled by C. Keith Martin, teaching associate, Indiana University, using as references Hughes (151), and the *Americana* (80), *Britannica* (81), and *World Book* (328) encyclopedias.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1%
3%
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4%
4%
50%
22%
INDO-EUROPEAN
SINO-TIBETAN
MON-KHMER
JAPANESE AND KOREAN
URALIC AND ALTAIC
DRAVIDIAN
MALAYO-POLYNESIAN
AFRICAN NEGRO
SEMITIC-HAMITIC-KUSHITIC
ALL OTHERS
ENGLISH
SPANISH
SPANISH
SPANISH
PORTUGUESE
ENG.
GER
RUSSIAN
PORT.
ITAL.
ARABIC
AFRICAN NEGRO
HINDUSTANI
CHINESE
JAPANESE
ENGLISH
Critically reviewed by Mario Pei

Courtesy of *The World Book Encyclopedia.*

includes native Hawaiian, Indonesian, the Philippine languages, and most other Pacific island languages.

The **Uralic-Altaic** family is quite diverse. Finnish and Hungarian are Uralic languages; Turkish, Mongolian, and some languages in southern U.S.S.R. are Altaic.

Japanese and **Korean** are often listed as a family, but they have some characteristics which suggest they may be further related to the Altaic languages.

Yet another large family is the **Hamito-Semitic** or Afro-Asiatic language family. Included are Arabic of northern Africa; Berber, once the native language of most of north Africa; Cushitic of Ethiopia; and Chad of northern Nigeria.

In the same continent are many other language families, the largest of which is the **Niger-Congo** family which spreads from west Africa south of the Sahara through the Congo basin to encompass most of south Africa. East Africa and the upper Nile valley inhabitants speak languages of the **Macro-Sudanese** family. Several other isolated language families are to be found on the African continent.

The **Dravidian** languages of southern India compose a separate language family.

Discussion of the more than 1,200 American Indian languages defies the scope of this appendix. They may be grouped into more than 55 language families. For detailed information a good source is Edward Sapir's article "Central and North American Indian Languages" (270).

The map on p. 114 shows the range and spread of the language families identified in this appendix.

Appendix D

The Terminology of Speech Sounds

Affricate: a sound articulated as a semi-plosive; e.g., la*tch* and ju*dge*

Alveolar: name for gum ridge behind the upper teeth

Alveolopalatal: articulation with front of tongue, alveolar ridge, and far front of palate

Articulate: to produce sounds through parts or organs in the mouth and throat

Aspirate: to follow consonants, usually plosives, with a puff of breath

Bilabial: articulation with the upper and lower lips

Close: articulation with tongue close to palate

Dental: articulation with tip of tongue and upper teeth

Dorcum: back section of the tongue

Fricative: a consonant pronounced by a narrowing of the air-passages, thus producing an audible friction as the air is exhaled

Glide: articulation as speech organs change from making one sound in preparation for making another

Glottis: opening between vocal cords

Implosive: the closing of the nasal and oral passages in order to make a plosive sound

Labial: articulation using upper and/or lower lips

Labiodental: articulation with lower lips and upper teeth

Labium: lip

Mandible: the lower jaw

Nasal: pertaining to the nose; nasal cavity is that space within the nose

Open: articulation with tongue as low in mouth as possible

Palate: bony roof of mouth (hard palate) and velum (soft palate)

Palatoalveolar: articulation using palate and alveolar ridge producing a fricative sound

Pharynx: a space formed by the lining of the throat and the root of the tongue

PLOSIVE: a consonant produced by completely closing the nasal and oral air passages (the glottis), resulting in retention of air, and then suddenly opening the closure

RESONANTS: articulations in which nose, mouth, and pharynx serve only to modify sound produced in the larynx

SONORITY: resonancy

SPIRANT: a synonym for fricative; a consonant such as [t] or [s]; breath friction at some point in the oral passage

STOP: plosive

UVULA: small appendage at the end of the velum

UVULAR: articulation with back of tongue and extreme back of velum or uvula

VELAR: articulation with the back of the tongue and velum

VELUM: soft palate (soft roof of the mouth)

VOICED: articulation by the vibration of vocal cords

VOICELESS: articulation without vibration of the vocal cords

Appendix E

The Development of the English Language[1]

THE Germanic or Teutonic invasions of Britain during the fifth century A.D. serve as a suitable starting point for recounting the story of the development of modern English. While a few Celtic and Roman words lingered on from an earlier day, it was in the Anglo-Saxon period, from about 450 to 1066, that important, formative changes took place.

There were four main Anglo-Saxon dialects: Kentish, Northumbrian, Mercian, and Wessex. Northumbrian was culturally important until Danish invasions in the ninth and tenth centuries disrupted the area. The power and influence of King Alfred made Wessex influential as Northumbrian waned and most Anglo-Saxon records such as the Anglo-Saxon Chronicle and the epic *Beowulf* were preserved in the Wessex dialect.

Our word *English* is derived from *Englisc,* the name commonly used by the Anglo-Saxon tribes for their language.

Perhaps only 15 percent of our words go back to Anglo-Saxon; but they include such common ones as nearly all personal pronouns, most prepositions and conjunctions, many of our commonest verbs, and a large number of commonplace nouns and adjectives. *Life, death, body* (and words for parts of the body), numerals, trees, common animals, and simple weapons frequently are Anglo-Saxon. Old English combined native elements into self-explanatory compounds, using many prefixes and suffixes, a technique which lessened during the Middle English period when it was easier to borrow French words. *To-, over-,* and *under-* are all Old English prefixes; *with-* gives us *withstand* and *withdraw;* nearly all words beginning *for-* as *forbear, forbid, forgive,* and *forget* are Old English.

The Teutons had borrowed some Latin words even before invading Britain; *strata*:street, *via*:way, *mynet*:mint, *pondus*:pound, *ynce*:inch, *win*:wine, *mil*:mile, and *Sæternesdoeg*:Saturday which is the only day of the week of Latin origin. From Roman missionaries the Anglo-Saxons acquired: ***abbot, angel, candle, monk, nun, organ, priest, psalm, school,*** and ***temple***. They also borrowed ***dish, fork, chalk, cap,*** and ***cook***.

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[1] Compiled by C. Keith Martin, teaching associate, Indiana University, using as references Alexander (3), Francis (92), Jespersen (161), and Whatmough (321).

The shift from Anglo-Saxon to Middle English occurred after the Norman conquest of England in 1066 A.D. and continued until about 1500 A.D. Almost one-half of the Norman and Parisian French words appeared during a period of rapid change from 1250 to 1400 as the French-speaking Normans made their language official in matters concerning government, schools, and court.

The areas of French influence are indicated by the borrowings ***pork, venison,*** and ***mutton,*** for Anglo-Saxon ***pig, deer,*** and ***sheep***. Words borrowed in this period often exist as synonyms rather than being integrated with Anglo-Saxon into one expression. ***Tailor, barber, mason,*** and ***carpenter*** are words of French origin for less essential occupations. ***Master, servant,*** and ***butler*** also are French loan words as are the military terms, ***war, peace, army, battle, defeat,*** and ***soldier,*** and the titles ***Mr., Mrs.,*** and ***Miss***. Words pertaining to the arts are mostly French: ***poet, literature, letters, verse, comedy, music, dance, color,*** and ***paint***. Sometimes words reflect mixed paternity as in French ***grand*** + English ***mother***. ***Catch, warden, launch,*** and ***wage*** come from English pronunciation of Norman words. ***Chase, guardian, dance,*** and ***gage*** come from the same sources only retaining some traces of French dialect.

French words adopted by the more educated people of 1500 are often considered more literary, formal, "refined," or unemotional; the older English synonyms are judged to be more colloquial or fundamental, as ***labor*** for ***work, city*** for ***town, people*** for ***folk, charity*** for ***love***.

Because French was the language of the government for some three hundred years, English was largely reduced to a spoken language among the lower classes where inflection was simplified as people concentrated on merely being understood. Endings were dropped or became alike; use of masculine or feminine gender was restricted to words of obvious sexual difference, all other items being referred to as "it."

Confusion in spelling grew when French and Latin scholars introduced *z* and *j* to the alphabet and made *f* and *v* separate letters. ***Th*** replaced Old English letters for the same sound; *u* was spelled *o* as in love, son, and come. ***Qu*** was used for the first time; *k* became popular as a letter of the alphabet; *sc* became *sh; g,* pronounced *y,* was also spelled *y*. Vowels were lengthened or shortened. Adverbs formed by ***-ly*** became common as did use of the preposition ***of*** to show possession. ***Do*** and ***did*** became auxiliary verbs.

During this time span (ca. 1100-1500) the midland or Mercian dialect played a dominant role in language change since it was often used for communication between speakers of the slower changing Wessex dialect and the more rapidly changing Northumbrian dialect Through trade with the English midlands, London maintained the Mercian dialect and later spread it to the whole country as a written language though change in vocal dialects lagged as much as two centuries behind. The location of Oxford and Cambridge Universities in the midlands and Chaucer's writings in this dialect also contributed to the eventual domination of the Mercian dialect.

Words interchanged with the Northumbrian and Mercian dialects following the ninth and tenth century Danish invasions, though actually Anglo-Saxon, were not used in the Wessex dialect from which came most Anglo-Saxon writing and are identified through writings in the Mercian dialect of the Middle English period. From the Norse invaders, whose language was also of Germanic origin, come *window, sky, skill, skin, score, ill, ugly, wing, hit,* and *till* as well as *they, there,* and *them.*

The invention of the printing press tended to stabilize spelling. However, the Renaissance created new changes in the English language which contributed to the disagreement between today's spelling and pronunciation. The Renaissance was accompanied by an almost complete transition in vowel pronunciation between 1450 and 1700. Scholars and writers borrowed heavily from classic Latin and Greek, causing great differences between nouns and their adjectives. Middle English nouns *eye, moon, sun,* and *house* are comparable to French and Latin adjectives *optic, lunar, solar,* and *domestic.* Most of the French words borrowed since 1500 have a French spelling and/or French pronunciation. *Machine,* where *i* sounds *ee* and *ch* sounds *sh* is such an example. More recently "society French" has been borrowed for impressiveness in writing. Dressmakers' French gives us *corsage* and *néglig锕 culinary French gives us *menu* and *pie à là mode;* from other sources come *fiancée, divorcée* and *de luxe.*

We have also borrowed from other languages. Nineteenth century German gave us *protestant, kindergarten, pretzel, sauerkraut,* and *delicatessen.* From the Dutch we borrowed *sloop, cruise, yacht,* and *skipper,* all sea terms. In the seventeenth century influential Dutch and Flemish art words such as *landscape* and *sketch* plus *cookie, cole-slaw,* and *caboose* were added. Italian art and music terms are *soprano, piano, violin, viola,* and *cello.* From Russia we have *czar, vodka,* and *sputnik.*

Our language continues to show world influences on its speakers as we selectively incorporate foreign words from other languages into our English tongue.